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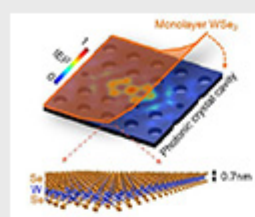


Thursday, April 2, 2015



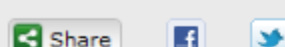
This week on *Light Matters*:  
**Thermal Vision ... and a Way to Foil It!**

### Nanolaser Uses Atomically Thin Gain Medium



With potential for on-chip optical communications applications, a tungsten-based nanoscale laser operates reliably on a tiny amount of electricity.

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### Facebook, Infinera to Create 8 Tb/s European Optical Network

Facebook Inc. is preparing to deploy an intelligent transport network developed by Infinera Corp. to create a 3998-km optical network route across Europe with a capacity of up to 8 Tb/s.

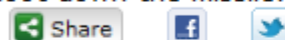
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### Canadian Military Helicopters to Carry Northrop Grumman IR Countermeasures Systems

The latest generation of the company's directional IR countermeasures (DIRCM) system protects the Chinook and its crew by automatically detecting a missile launch, determining if it's a threat, and activating a high-intensity laser to track and shoot down the missile.

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## Featured Products



### Flame Spectrometer

Ocean Optics  
The Flame spectrometer is built using industry-leading manufacturing techniques that help deliver high thermal stability and low unit to unit variation.

[More info >>](#)



### Snapshot Micropolarizer Camera

4D Technology Corp.  
The PolarCam™ snapshot micropolarizer camera simultaneously captures images at 4 polarization angles from each video frame, enabling a range of image enhancement techniques and polarimetric measurements.

[More info >>](#)



### Violet 405nm Laser

Necsel  
Necsel introduces the newest wavelength to their Matrix product line: 405nm. Every module comes fiber coupled with a 400 micron 0.22NA.

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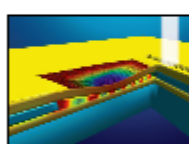


### Custom Optical Mirrors

Sydor Optics, Inc.  
Sydor Optics has extensive experience in pitch polishing of custom optical mirrors. Our precision manufacturing capabilities include diameters up to 600mm, surface flatness to 1/20 wave (size dependent) and various metallic coating options.

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## More Articles on Photonics.com



### Plasmonic Modulators Could Work as Submicron Switches

Nanomechanical plasmonic phase modulators could be used as optical switches with footprints smaller than one square micron, potentially allowing densely packed photonic chips.

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### UK Machine Vision Group Selects New Leadership

The U.K. Industrial Vision Association (UKIVA) has chosen a new leadership team and welcomed new committee members.

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### Meadowlark Optics Acquires Spatial Light Modulator Product Line

Meadowlark Optics Inc. has acquired the spatial light modulator (SLM) product line from Cambridge Research & Instrumentation Inc.

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## WEBINAR



### Novel SWIR Detectors and Imagers Approaching the Thermodynamic Detection Limit

Thursday, April 9 1pm EDT

FREE WEBINAR



Hooman Mohseni

New research shows that devices based on electron injection might be able to approach the thermodynamic limit of sensitivity in shortwave-infrared (SWIR) detectors at relatively high temperatures. Because the energy of photons is significantly larger than the thermal energy in this region, non-cryogenic single-photon detectors with high detection efficiency and very low false detection rate seem feasible for the first time.

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### RMI Launches Custom Optomechanical Assembly Service

Services include design using Zemax and SolidWorks software, Class 100 clean room manufacturing and coating, as well as advanced testing and metrology.

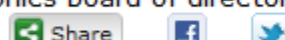
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### Photonics Promotes Kirlin to CEO

Dr. Peter Kirlin, currently the company's president, will succeed CEO Constantine "Deno" Maccicostas, who will continue as executive chairman of the Photonics board of directors.

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### New Managing Director Named for Trumpf Canada

Stefan Fickenscher will be responsible for the day-to-day operations at Trumpf Canada, including sales, service and spare parts at the subsidiary's new location in Mississauga, Ontario.

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## WHITE PAPER



### Fabricating and Testing Freeform Optics: Current Capabilities, Lessons Learned and Future Opportunities

Optimax Systems

Freeform optical shapes or optical surfaces that are designed with non-symmetric features are gaining popularity with lens designers and optical system integrators. A common question about freeform optics is, "If I design it, can you really make it?" This paper will overview a freeform optical fabrication process that includes generation, high speed VIBE polishing, sub-aperture figure correction, surface smoothing and testing of freeform surfaces. This paper will briefly highlight the progress made to each of the processes as well as the challenges associated with each of them.

[DOWNLOAD WHITE PAPER >>](#)

## Industry Events

### SPIE DSS 2015 - April 20-24, 2015 · Baltimore Convention Center

The weeklong event features SPIE's Sensing Technology + Applications and Defense + Security symposia.

SPIE Defense + Security focuses on IR systems; lidar and radar; laser technology; image processing; data analysis; intelligence, surveillance and reconnaissance systems (ISR); display technologies; unmanned systems and robots; CBRNE; cyber sensing and security; biometric technology; law enforcement; energy harvesting; and more.

SPIE Sensing Technology + Applications focuses on commercial sensing and imaging topics and further development of affordable technology options with civilian applications.

[More info >>](#)



### Thermal Laser Power Detectors

Product Manager Susanne Dröscher presents the latest product developments including an ultrafast laser power detector for average powers up to 50 W, the most compact thermal detectors on the market and a position sensitive device. All greenTEG power detectors are especially designed to meet the needs of OEMs.

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