Tuesday, August 20, 2019

# Asia-Pacific PHOTONICS

Quarterly newsletter highlighting the latest photonics news, features and products targeted to the Asia-Pacific regional market. Manage your Photonics Media membership at Photonics.com/subscribe.



## Asia-Pacific News

### Smart Glass Could Offer a New Route to Machine Vision

A new type of smart glass, developed by a team at the University of Wisconsin-Madison, leverages optical reflection to recognize images without requiring sensors, circuits, internet connection, or external power sources. Everything needed for image recognition is condensed into single pieces of glass.

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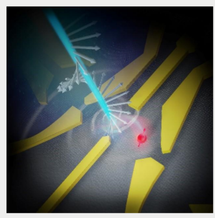
### Sending Quantum Information Securely from Laser Light to a Quantum Dot

Scientists from Osaka University have demonstrated how information encoded in the circular polarization of a laser beam can be translated into the spin state of an electron in a quantum dot (QD). They used laser light to send quantum information to a QD by altering the spin state of a single electron trapped on the QD.



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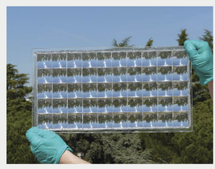
### Photovoltaic Technologies Aim for Higher Efficiency Ratings

Between 2012 and 2017, global solar capacity more than quadrupled to a total of 402 gigawatts. As global solar capacity increases, new materials and photovoltaic designs could deliver greater efficiency than conventional silicon cells, at a reasonable cost.



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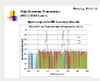
## Featured Products

**Dual Light Sheet Microscopy**

**Applied Scientific Instrumentation Inc.**

ASI's Dual Selective Plane Illumination Microscopy for Cleared Tissue (ct-dSPIM) is one of many light sheet microscope configurations possible using our modular components. This flexible and easy-to-use Selective Plane Illumination Microscopy (SPIM) implementation allows for dual views of large samples such as cleared tissue (ct).

Visit Website | Request Info



**High-Operating-Temperature DBRs**

**Photodigm Inc.**

Photodigm, Inc. now offers High-Operating-Temperature DBR laser diodes with a set point temperature ranging from 50°C to 60°C. The H.O.T. DBRs provide equal performance and precision with a significant reduction in total system power by eliminating the need to "cool" the laser.

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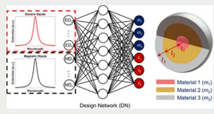
## More News

### Data-Based Design Method for Metamaterials Uses Artificial Intelligence

The process for designing metamaterials could be improved by using data-driven approaches based on deep learning, according to researchers at Pohang University of Science and Technology. The researchers used a deep-learning-assisted inverse design method to enable structural parameters and material for metamaterials to be designed simultaneously and with a greater degree of freedom.

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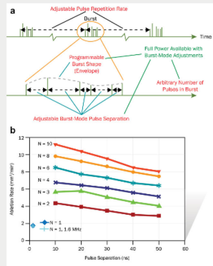
### Picosecond Lasers Transform Volume Manufacturing

Laser micromachining has revolutionized volume manufacturing, enabling smaller feature sizes, novel device geometries and materials, improved process yields, and reduced production costs. Industries as diverse as consumer electronics, medical devices, clean energy, and automotive have benefited from nonstop advancements in the technology.

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### TOPTICA Photonics Opens Facilities in China

Laser developer and producer TOPTICA has expanded into China with a head office in Shanghai and a branch in Beijing to provide sales, service, and application support for its full range of technologies.

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### Facial Recognition Used to Monitor ICU Patient Safety

A scientific team at Yokohama City University Hospital has used facial recognition technology to develop an automated system that can predict with moderate accuracy (75%) when patients in the intensive care unit (ICU) are at high risk of unsafe behavior.

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