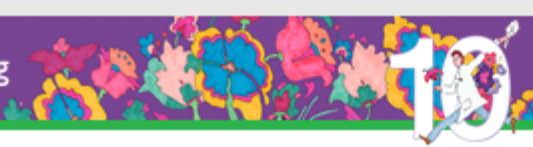



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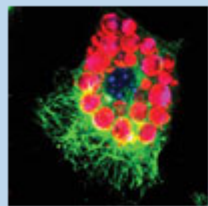


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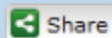
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Challenges to CARS Microscopy: Light at the End of the Tunnel

More than 10 years of development have made this label-free imaging technique more accessible. CARS microscopy historically has struggled to break into a marketplace already crowded with popular imaging techniques such as fluorescence microscopy and with new superresolution techniques such as stochastic optical reconstruction microscopy and stimulated emission depletion microscopy.

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OCT Technologies, Applications Showing Great Promise

Industry experts reflect on OCT's expanding biomedical imaging applications and on the present and future markets. OCT is growing. As we reported in the July issue, the optical imaging market is set to reach \$1.9 billion by the end of 2018 - a compound annual growth rate of 11.37 percent - and OCT makes up 70 percent or more of that market, according to a study by Research and Markets.

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Magnification Fluoroscopy Technique Drives Advances in Clinical Studies

Thin-film CsI:Tl coatings offer real-time high-resolution video, enabling discoveries in medical research trials. Advances in x-ray imaging techniques are bringing benefits to in vivo imaging applications. One such advance is LabScope, a high-resolution, low-dose magnifying x-ray fluoroscopic system that uses a thallium-doped cesium iodide scintillator.

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Molecular Spectroscopy Illuminates Life-Governing Systems

Suitable for a host of applications, this technique still requires the technical know-how of experts to reach maturity. Molecular spectroscopy is photonics at its most fundamental: the interaction between light and matter. The information that this technique uncovers is also fundamental to us and to how we relate to every other organism around us.

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Looking Down the Endoscope

Confocal microscopy, a technique that takes advantage of point illumination and a pinhole to achieve improved resolution and contrast compared with conventional wide-field fluorescence microscopy. Especially with recent advances, the technique shows a great deal of potential for endoscopic applications.

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Biophotonics Products



Optical Thickness Gauge

Bristol Instruments, Inc.

Bristol Instruments has introduced the 157 Series optical thickness gauge for manufacturers whose development and production processes require precise thickness information about materials such as specialty plastic films, medical membranes and ophthalmic products.

[More info >>](#)



Digital Laser Controller

TOPTICA Photonics, Inc.

Toptica Photonics Inc.'s DLC pro provides laser diode current, temperature and piezo drivers with extremely low noise and drift properties, boosting the performance of its DL pro tunable laser, which now runs with linewidths down to 10 kHz.

[More info >>](#)



CCD Cameras

Raptor Photonics Ltd.

Raptor Photonics Ltd.'s CCD cameras, developed using Sony ExView HAD II sensor technology, offer a choice of 2.8-, 6- or 9-MP resolution and are available in both mono and RGB. Pixel size is 4.54 µm.

[More info >>](#)



CMOS X-Ray Detector

Teledyne DALSA, Machine Vision OEM Components

Teledyne Dalsa Inc. has added the Xineos-1515 CMOS x-ray detector to its flat detector series for clinical fixed and mobile applications such as C-arms, fluoroscopy and 3-D orthopedic imaging systems.

[More info >>](#)

Industry Events

SPIE Medical Imaging 2014 - Feb. 15 - 20, 2014 • San Diego, CA



Conference Topics will include Physics of Medical Imaging; Image Processing; Computer-Aided Diagnosis; Image-Guided Procedures, Robotic Interventions, and Modeling; Image Perception, Observer Performance, and Technology Assessment; Biomedical Applications in Molecular, Structural, and Functional Imaging; PACS and Imaging Informatics: Next Generation and Innovations; Ultrasonic Imaging and Tomography; and Digital Pathology.

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