

IMAGING

Tech Pulse



November 2016

Imaging Tech Pulse is a special edition newsletter from Photonics Media and Raptor Photonics covering key developments in imaging technology.

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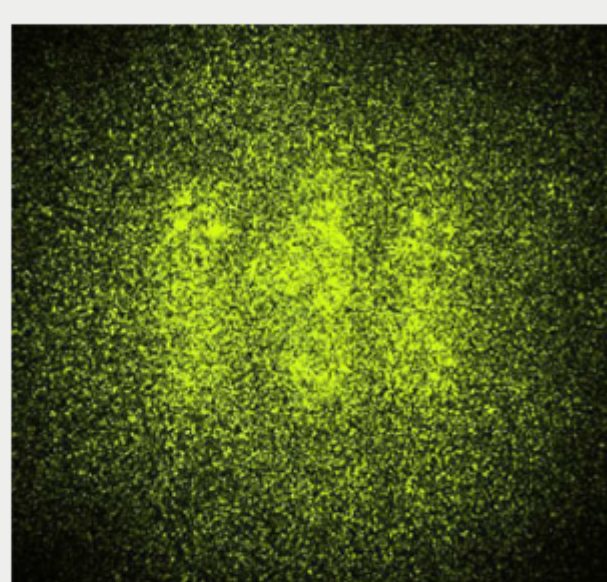


X-Ray Camera Solutions



Camera System Images Weak Targets by Negating Glare

Coherence gated negation (CGN) is a novel imaging method that uses destructive optical interference to suppress glare and allow imaging of a target that may be hidden behind a scattering medium such as fog or clouds. In contrast to conventional coherence gating methods, which "gate in" the target optical signal, CGN works by actively "gating out" the unwanted optical contributions.



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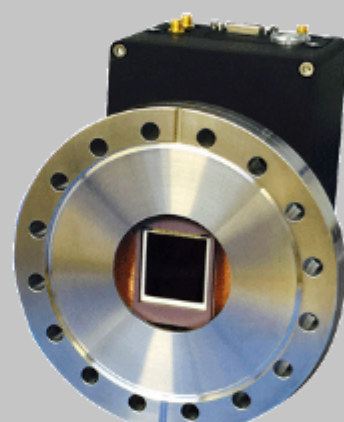
PROMOTED CONTENT



Raptor Photonics Ltd.

Eagle XO X-Ray

Introducing a high energy version one of the most sensitive CCD cameras in the World. Using back-illuminated 1MP and 4MP CCD sensors from e2v, and putting into Raptor's proprietary PentaVac vacuum enclosure and cooling it to a delta of greater than -110°C, the Eagle XO is an open front detector with a range of flanges available.



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Butterfly Beauty Perfected by Defects

Having trouble accepting your physical flaws, whether they are cellulite or blemishes? Try being like a butterfly and let your "defects" help you shine. New findings published in Science Advances on the microscopic structures on the wings of the Kaiser-i-Hind butterfly (*Teinopalpus imperialis*) are providing insights into how these insects appear so colorful. Using a powerful x-ray microscope at the Advanced Photon Source of the U.S. Department of Energy (DOE), researchers studied the light-scattering photonic crystals found in the scales of a wing.

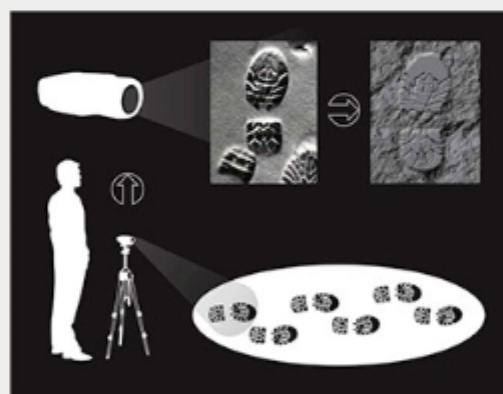


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User Friendly Crime Scene Forensics for Snow and Soil

Encoding data in LED light could lead to improvements in portable crime scene forensics technology, allowing investigators to take more precise high-resolution 3D images of shoeprints and tire-tread marks in snow and soil.

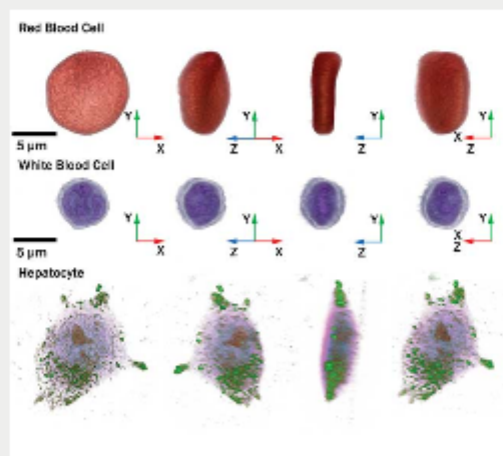


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Holotomography Unlocks New Potential for Life Sciences Research

Cellular analysis plays a crucial role in a wide variety of research and diagnostic activities in the life sciences. However, the information available to researchers and clinicians is limited by current microscopy devices and techniques. An innovative new tool — a microscope that displays 3D holograms — can overcome many of these limitations and open new vistas for researchers and clinicians to understand, diagnose and treat disease.



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MSI Camera to Track Potential Dangers in Low Visibility Areas

A surveillance camera now under development will use a multispectral imaging (MSI) platform to capture and reveal information about coastal, road and environmental situations, such as invisible gases or fire sources through dense fog. In contrast to current MSI cameras, which have bulky filter wheels and sensors that require cooling, this device will be designed to weigh less than two kg and will be able to capture images of moving objects in real-time.

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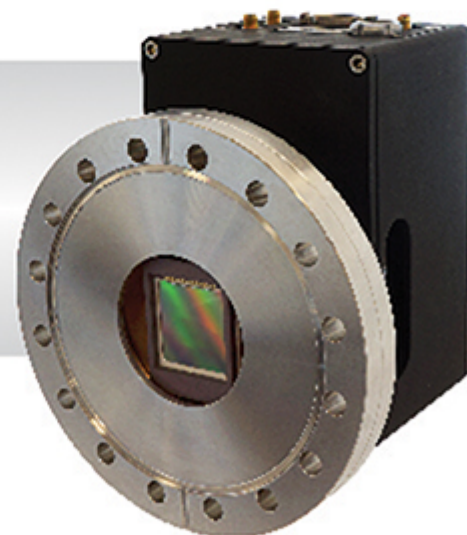


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Eagle XO X-Ray

Cooled 1MP & 4MP
High Energy CCDs



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