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 The Moscone Center, San Francisco, California, USA

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**Enhanced Cloaking Device Eliminates Reflections**



A new technology refines the original invisibility cloak created at Duke University by eliminating the reflections at the edges of the device that result in lost waves – one of the key issues preventing complete invisibility. The approach could have other applications as well. For example, metamaterials such as those in the cloak can “smooth out” twists and turns in fiber optics, making them seem straighter.

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**X-ray Laser Supercharges Atoms**

Using a single flash from the world’s most powerful x-ray laser, researchers at SLAC have stripped a record number of electrons from xenon atoms, creating a “supercharged,” strongly positive state at energies previously thought too low.

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**Merten Named President of Photonics21**

Genoptik CEO Dr. Michael Mertin is the new president of the European Technology Platform Photonics21, the organization announced this week. Mertin fills the vacancy created by the resignation of Osram’s Martin Goetzler earlier this year.

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**Supercheap Hydrogen Recipe: Sunlight + Water + Rust**

Water and rust have been used to produce hydrogen from sunlight supereconomically, a team from École Polytechnique Fédérale de Lausanne (EPFL) reports.

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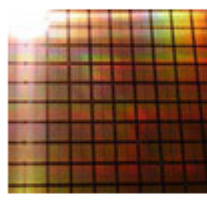
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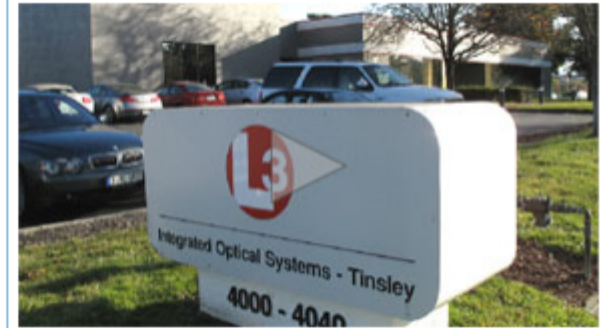


**EMCCD Camera**  
Photometrics



In this week’s edition of the industry’s premier weekly newscast: hydrogen is having a moment, a revolutionary artificial lens is nearly identical to the lens in the human eye, tariffs on solar panels from China are upheld, and a group in Wales wants to increase broadband capacity by two thousand percent. Hosted by Photonics Media’s Melinda Rose and Laura Marshall.

**FEATURED VIDEO**



**L-3 Communications Tinsley - Optics for Defense & Security**

L-3 Communications - Tinsley describes their capabilities in design, analysis, manufacture, assembly and evaluation of optical systems including lenses, mirrors and telescopes. This video includes examples of diamond-turned optics; visible quality aluminum mirrors; glass, SiC and metal components; high volume manufacturing; and lens assembly. Processing capability in CCOS polishing and profilometry is also illustrated.

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**CERN Detector to Measure Supershort Light Pulses**

Conventional measurement techniques soon will be too slow to measure phenomena taking place on timescales faster than an attosecond. To measure such light pulses, scientists have proposed a method to create the world’s most precise stopwatch.

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**Nanocrystals Improve Hydrogen Production**

Adding nanocrystals can make the light-driven production of hydrogen more robust and cost-effective, a team at the University of Rochester discovered.

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**Canada Develops Silicon Photonics ‘Action Plan’**

A national action plan is under way to help Canadian companies exploit the commercial potential of silicon photonics – a market that is expected to grow to more than \$2 billion by 2015.

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**Sensor Reads Single Photons Ultrafast**

In imaging, every single photon counts, and now, thanks to an ultrasensitive sensor, those individual photons can be read within a few picoseconds, yielding high-quality images even in extremely low-light situations.

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**Industry Events**


**1<sup>st</sup> International Biophotonics Meeting in Israel** - December 9 - 11, 2012 - Tel Aviv, Israel



Supported by SPIE, the 1st International Biophotonics meeting in Israel (BPI2012) will gather globally renowned scientists from around the world, Israeli scientists and clinicians, as well as industrialists and entrepreneurs. This group will present their work and discuss open issues in the field, while exposing the up-to-date research at the frontier to local students, researchers, and industrial research and development representatives. The meeting aims to strengthen connections and trigger bi-national and multi-national research collaborations. Keynote speaker will be Steven L. Jacques (Oregon Health & Science University, Depts. of Biomedical Engineering & Dermatology). Conference invited speakers include Irving Bigio, Boston University; Daniel Palanker, Stanford University and Gabriel Idan, Given Imaging.

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**ASCB 52<sup>nd</sup> Annual Meeting** - December 15 - 19, 2012 - San Francisco, CA  
 Visit us at booth 1201



ASCB is the premier international cell biology meeting for scientists and students in academia, industry, government and higher education. Engage with more than 3000 poster presentations and attend over 100 scientific sessions, science discussion tables, symposia and minisymposia sessions, workshops and a Frontier symposia that will synthesize current, exciting progress in the field. The 2012 event features will also include an exhibit of more than 350 companies, education initiative forums, a postdoc/student town hall council meeting and keynote presentations by US Secretary of Energy Steven Chu and Arthur D. Levinson, chair of Genentech Inc. and Apple Inc.

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