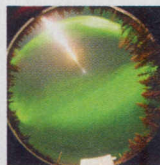


Smarter Cameras Keep Watch





NEWS & ANALYSIS 18 | TECH NEWS

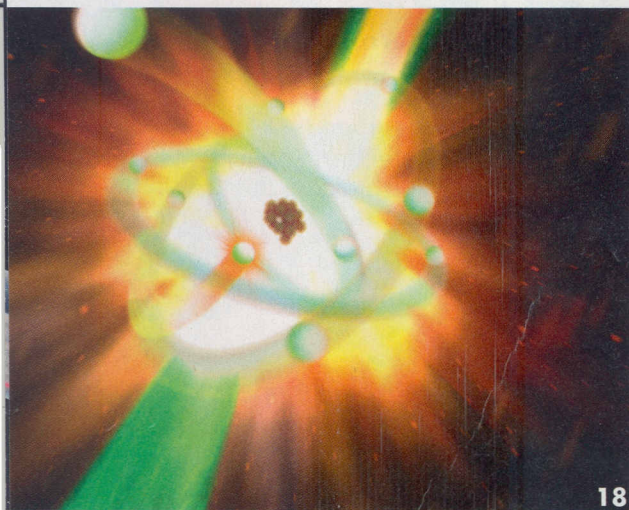
Photonics Spectra editors curate the most significant photonics research and technology headlines of the month – and take you deeper inside the news. Featured stories include:

- Avalanche of emissions creates first atomic x-ray laser
- Tunable optical filter uses nanoantennas
- New resonator overcomes obstacle to ultimate nanolaser

32 | FASTTRACK *Business and Markets*

Making Ottawa the World's Photonics Center

45 | GREENLIGHT New solar cells are more efficient



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THE COVER

Contributing Editor Hank Hogan's article on surveillance/security cameras inspired this month's cover. Design by Senior Art Director Lisa N. Comstock.

FEATURES

46 | CONNECTED AND SMARTER, CAMERAS KEEP WATCH

by Hank Hogan, *Contributing Editor*

In all types of surveillance and security applications, IP-based digital cameras are quickly supplanting closed-circuit television.

52 | CONSCRIPTING TERAHERTZ SENSORS

by Lynn Savage, *Features Editor*

The versatility of the terahertz range inspires government researchers and others to undertake the slow process of developing its applications.

58 | MULTIBAND OPTICAL FILTERS FIND APPLICATIONS OUTSIDE FLUORESCENCE

by Jason Palidwar and Catherine Aldous, *Iridian Spectral Technologies*

Besides bioanalysis, applications for multiband dielectric filters now include entertainment, astronomy and telecommunications.

62 | THE NIGHT GLOWS BRIGHTER IN THE NEAR-IR

by Danny De Gaspari, Jan Veldeman, Patrick Lamerichs, Siegfried Hertfijd, Patrick Merken and Jan Vermeiren, *Xenics NV*

Airglow is most intense in the short-wave infrared range, so this regime is ideal for night-vision applications.

66 | HOW TO EVALUATE A MEASUREMENT APPLICATION'S REQUIREMENTS

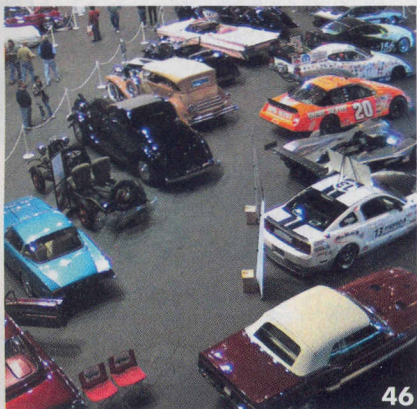
by C.W. "Ron" Swonger, *Coherix Inc.*

Dimensions and material composition aren't the only factors to consider when optimizing a noncontact metrology solution.

70 | DEFENSE, SECURITY SHOW TARGETS BALTIMORE

by Laura S. Marshall, *Managing Editor*

A new venue for this SPIE conference and trade show will benefit both exhibitors and attendees.



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