



NEWS & ANALYSIS

16 | **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:

- TIGO laser ranging telescope targets satellites
- Masking moments in time by splitting light
- 2-million-degree matter reveals the structure of stars

36 | **FAST TRACK**

Business and Markets

The impact of Thailand's epic flood continues into 2012
Optics industry on steady ground after quake
Kodak to delete its digital device division

45 | **GREEN LIGHT**

Solar concentration without mirrors

10 | **EDITORIAL**

47 | **LASERS IN USE**

Lessons learned from a recent laser accident
by Michael B. Woods, SLAC National Accelerator Laboratory

90 | **PEREGRINATIONS**

Out of the blue, into the office

DEPARTMENTS

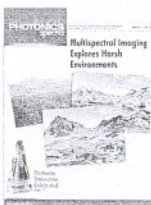
76 | **BRIGHT IDEAS**

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THE COVER

The many ways remote sensors are used to explore the most forbidding areas on the planet inspired this month's cover art. Article by Lynn Savage on page 50. Design by Senior Art Director Lisa N. Comstock.

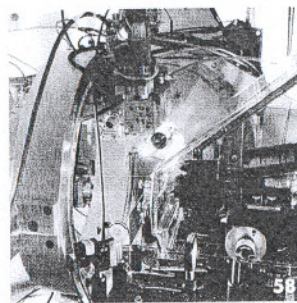


FEATURES

50 | **MULTISPECTRAL IMAGING EXPLORES HARSH ENVIRONMENTS**

by Lynn Savage, Features Editor

By gathering data on environments that are dangerous for humans, remote sensing helps determine the health of the ecosystem.



58 | **ULTRAFASST FIBER LASERS ENABLE UNIQUE MATERIALS RESEARCH**

by Dr. Tony Lin, Calmar Laser Inc.

The robust architecture and low maintenance of fiber-based architectures, along with extraordinary performance parameters, are enabling innovative laboratory research.

61 | **LASERS CHANGE THE SHAPE OF THE PHOTOVOLTAICS INDUSTRY**

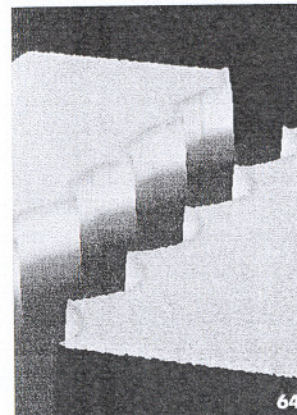
by Marie Freebody, Contributing Editor

PV development and manufacturing are well served by laser technology, including processes such as doping, welding, ablation, trenching and drilling.

64 | **NEXT-GENERATION CMOS REDEFINES TRADE-OFFS FOR INSPECTION**

by Behnam Rashidian and Eric Fox, Teledyne Dalsa

To arrive at the best CMOS imaging device design, both the physics of operating the device and the practicalities of implementing the design must be considered.



67 | **PHOTONIC SENSORS HELP KEEP EARTH CLEAN, GREEN**

by Dr. Radu Barsan, Rio Inc.

In energy sectors ranging from fossil fuel to geothermal, photonic technologies are playing various roles in developing and maintaining clean, efficient systems.

71 | **2011 PRISM AWARDS WINNERS**

by Melinda Rose, Senior Editor

A wrap-up of this year's winning entries highlights the amazing innovations of the photonics industry.

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