

OPN

Optics &
Photonics
News

Multispectral Imaging

Moves into the
Mainstream

The Emerging
Field of
Correlation
Optics

Max Planck:
Founder of
Quantum
Theory

**Multispectral
imaging combines
two to five spectral
bands into a single
optical system.**

COVER: A multispectral image from the DMCii satellite of Bahia de Malagueta, Las Tunas, Cuba. This page: A multispectral image of Golestan, Iran. The UK-DMC-2 22-m satellite obtained the images from orbit using three spectral bands: red, green and NIR. Images courtesy of DMCii.

[COVER STORY]

18 Multispectral Imaging Moves into the Mainstream

Advances in sensors, filters and apertures are driving the evolution of multispectral imaging from expensive one-off systems for military and defense applications to affordable, practical, commercial systems for use in everything from medical imaging to satellite remote sensing.

Valerie C. Coffey

25 The Emerging Field of Correlation Optics

Correlation optics provides tools—both conceptual and experimental—for measuring various parameters of an optical field in partial coherence and polarization. This area of study could enable unique applications for industrial quality control, solid-state physics, medical diagnostics and ecological monitoring.

Oleg V. Angelsky, Peter V. Polyanskii and Christina V. Felde

30 Max Planck: Founder of Quantum Theory

Max Planck's scientific career spanned some of the most turbulent times in German history—the Wilhelminian Empire, the Weimar Republic and the Third Reich. Through it all, he advanced and protected physics, with his own research evolving from theoretical physics that was firmly grounded in thermodynamics to his blackbody distribution law, which forced him to invoke non-classical ideas.

Barry R. Masters



Greg Hren, MIT Research Laboratory of Electronics

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Metamaterial superlenses; fiber-based ellipsometry for studying thin films; attosecond-precision pulse trains; finer control from an X-ray laser.

Patricia Daukantas and Yvonne Carts-Powell

10 Optical Engineering

The meaning and measure of lateral resolution for surface profiling interferometers.

Peter de Groot, Xavier Colonna de Lega, Daniel Sykora and Leslie Deck

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Ira Sprague Bowen: Frederic Ives medalist, 1952.

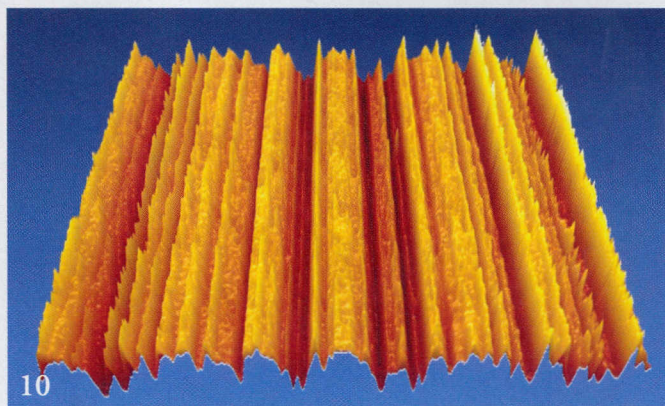
John N. Howard

36 The OSA Foundation

Thank you 2011 contributors.

41 In Memory

Remembering H. John Caulfield, retired Chief Scientist at Alabama A&M University Research Institute, U.S.A., and an OSA Fellow Emeritus.



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