

This index includes a list of the feature articles published in OPN, as well as an alphabetical roster of authors and book reviewers. The feature articles are classified by OCIS code. Issues of the magazine searchable by author, title, keyword and OCIS code, dating from the beginning of 2002, can be accessed on the Web at [www.osa-opn.org](http://www.osa-opn.org).

**About the OCIS Codes:** The Optics Classification and Indexing Scheme (OCIS) is a comprehensive classification system. OPN feature articles in this index are classified under the 36 main headings that make up the top level of the two-level OCIS system. All OSA journals use these categories to index articles.



**000 General**

An Analysis of OSA's Peer Review Survey, *John Childs, Kelly Cohen, Mark Dixon, Paul L. Kelley*.....**3:14**

Peace Through Science  
*Kim Douglass*.....**8:20**

Rochester's Optics Institute Turns 75, *Kim Douglass*.....**10:28**

Seeing the Light in Spain  
*Kim Douglass*.....**6:28**

**010 Atmospheric and Ocean Optics**

A Blue Sky History  
*Pedro Lilienfeld*.....**6:32**

Lasing Action in Air Induced by Ultrafast Laser Filamentation  
*Qi Luo, Abbas Hosseini, Weiwei Liu, See Leang Chin*.....**9:44**

**020 Atomic and Molecular Physics**

Department of Defense Contributions to U.S. Science and Technology  
*William Happer*.....**11:34**

**050 Diffraction, Gratings**

Laser Beam Splitting by Diffractive Optics  
*Michael A. Golub*.....**2:36**

Simple Principles of the Talbot Effect, *Changhe Zhou, Wei Wang, Enwen Dai, Liren Liu*.....**11:46**

**060 Fiber Optics/Optical Communications**

A New Nano-Twist for Unclad Optical Fibers, *Jeff Hecht*.....**4:20**

Advances in Efficiency, Speed Reported at OFC 2004  
*Jeff Hecht*.....**5:18**

High Power Fiber Lasers  
*Almantas Galvanauskas*.....**7:42**

Holographic Bragg Reflectors, Photonic Bandgaps and Photonic Integrated Circuits  
*Thomas W. Mossberg, Christoph M. Greiner, Dmitri Iazikov*.....**5:26**

Key Enabling Technologies for Future Networks  
*Ken-ichi Sato*.....**5:34**

Polymers in the Light Path  
*Lawrence W. Shacklette*.....**11:22**

Quantum Key Distribution: How Do We Know It's Secure?  
*Norbert Lütkenhaus*.....**3:24**

Submarine Systems: From Laboratory to Seabed  
*Vincent Letellier*.....**2:30**

Toward Practical Fiber Optical Parametric Amplifiers and Oscillators  
*Michel E. Marhic, Kenneth K.-Y. Wong, Georgios Kalogerakis, Leonid G. Kazovsky*.....**9:20**

**070 Fourier Optics and Optical Signal Processing**

Simple Principles of the Talbot Effect, *Changhe Zhou, Wei Wang, Enwen Dai, Liren Liu*.....**11:46**

**080 Geometrical Optics**

Lenses in Cinematography  
*Iain A. Neil*.....**1:26**

Manipulating the Near Field With Metamaterials  
*John Pendry*.....**9:32**

Optics and the Old Masters Revisited, *David G. Stork*.....**3:30**

**090 Holography**

Holographic Bragg Reflectors, Photonic Bandgaps and Photonic Integrated Circuits  
*Thomas W. Mossberg, Christoph M. Greiner, Dmitri Iazikov*.....**5:26**

Holography: From Science to Subcultures  
*Sean F. Johnston*.....**7:36**

Laser Beam Splitting by Diffractive Optics  
*Michael A. Golub*.....**2:36**

Stephen Benton on Holography, Polaroid and MIT  
*Sean F. Johnston*.....**8:32**

**110 Imaging Systems**

Intravascular Optical Coherence Tomography Opens a Window Onto Coronary Artery Disease  
*Joseph Schmitt, David Kolstad, Christopher Petersen*.....**2:20**

Terahertz Imaging for Drug Detection and Large-Scale Integrated Circuit Inspection  
*Kodo Kawase*.....**10:34**

Time-Multiplexed Integral Imaging for 3D Sensing and Display, *Ju-Seog Jang, Bahram Javidi*.....**4:36**

**120 Instrumentation, Measurement, Metrology**

Astronomy at the South Pole  
*Gregory Wright*.....**1:34**

Interferometry for Accurate Displacement Metrology  
*John Lawall*.....**10:40**

Spatial Heterodyne Spectroscopy For High Spectral Resolution Space-Based Remote Sensing  
*John M. Harlander, Fred L. Roesler, Christoph R. Englert, Joel G. Cardon, Jeff Wimperis*.....**1:46**

Spinning-Disk Interferometry: The BioCD, *David D. Nolte, Fred E. Regnier*.....**10:48**

Using Optics to Monitor Volcanoes, *Ulrike Willer, Christian Bohling, Wolfgang Schade*.....**3:18**

**140 Lasers, Laser Optics**

High Power Fiber Lasers  
*Almantas Galvanauskas*.....**7:42**

Lasers and the Fine Art of Art Conservation  
*Daniel Dawes*.....**9:16**

Lasing Action in Air Induced by Ultrafast Laser Filamentation  
*Qi Luo, Abbas Hosseini, Weiwei Liu, See Leang Chin*.....**9:44**

The Diode Laser: The First 30 Days, 40 Years Ago  
*Russell D. Dupuis*.....**4:30**

**150 Machine Vision**

Optics and the Old Masters Revisited, *David G. Stork*.....**3:30**

**160 Materials**

Ecologically Friendly Optical Glasses, *Joseph S. Hayden* ....**8:36**

Manipulating the Near Field With Metamaterials  
*John Pendry* .....**9:32**

**170 Medical Optics**

CARS Microscopy for Biology and Medicine, *Eric O. Potma, X. Sunney Xie* .....**11:40**

Cutting Tissue With Ultrashort Pulsed Laser Light, *Philbert S. Tsai, Beth Friedman, Jeffrey Squier, David Kleinfeld* .....**7:24**

Diagnosing Glaucoma With Laser Precision  
*Odetta Callender* .....**5:22**

High Speed Microscopy in Biomedical Research  
*Howard R. Petty* .....**1:40**

Intravascular Optical Coherence Tomography Opens a Window Onto Coronary Artery Disease  
*Joseph Schmitt, David Kolstad, Christopher Petersen* .....**2:20**

Noninvasive Imaging of the Brain, *Gary Boas* .....**1:52**

Optics-Inspired Student Entrepreneurship, *Gregory P. Crawford, Eric M. Suuberg* ....**8:26**

Phakic Intraocular Lenses: The New Focus in Refractive Surgery, *G. Michael Morris, Lee T. Nordan* .....**9:26**

Spinning-Disk Interferometry: The BioCD, *David D. Nolte, Fred E. Regnier* .....**10:48**

Wavefront-Guided LASIK  
*Jim Schwiegerling* .....**2:26**

**180 Microscopy**

CARS Microscopy for Biology and Medicine, *Eric O. Potma, X. Sunney Xie* .....**11:40**

Evanescent Wave Vibrational Microscopy  
*Mi K. Hong, Anna Swan, Shyamsunder Erramilli* .....**7:30**

High Speed Microscopy in Biomedical Research  
*Howard R. Petty* .....**1:40**

Nanocomputing With Nanoclusters, *Tae-Hee Lee, Robert M. Dickson* .....**6:22**

**190 Nonlinear Optics**

Toward Practical Fiber Optical Parametric Amplifiers and Oscillators  
*Michel E. Marhic, Kenneth K.-Y. Wong, Georgios Kalogerakis, Leonid G. Kazovsky* .....**9:20**

**220 Optical Design and Fabrication**

Ecologically Friendly Optical Glasses, *Joseph S. Hayden* ....**8:36**

Lenses in Cinematography  
*Iain A. Neil* .....**1:26**

**230 Optical Devices**

Low-Dimensional Optical Waves And Nano-Optical Circuits  
*Junichi Takahara, Tetsuro Kobayashi* .....**10:54**

Polymers in the Light Path  
*Lawrence W. Shacklette* .....**11:22**

White-Light LEDs  
*Yukio Narukawa* .....**4:24**

**240 Optics at Surfaces**

A New Nano-Twist for Unclad Optical Fibers, *Jeff Hecht* .....**4:20**

Low-Dimensional Optical Waves And Nano-Optical Circuits  
*Junichi Takahara, Tetsuro Kobayashi* .....**10:54**

Manipulating the Near Field With Metamaterials  
*John Pendry* .....**9:32**

**250 Optoelectronics**

Nanocomputing With Nanoclusters, *Tae-Hee Lee, Robert M. Dickson* .....**6:22**

The Diode Laser: The First 30 Days, 40 Years Ago  
*Russell D. Dupuis* .....**4:30**

**270 Quantum Optics**

Quantum Information Processing Based on Optically Driven Semiconductor Quantum Dots  
*Xiaoqin Li, Duncan Steel, Daniel Gammon, Lu J. Sham* .....**9:38**

Quantum Key Distribution: How Do We Know It's Secure?  
*Norbert Lütkenhaus* .....**3:24**

White-Light LEDs  
*Yukio Narukawa* .....**4:24**

**280 Remote Sensing**

Synthetic Aperture Radar, *Armin W. Doerry, Fred M. Dickey* ...**11:28**

**300 Spectroscopy**

Spatial Heterodyne Spectroscopy For High Spectral Resolution Space-Based Remote Sensing  
*John M. Harlander, Fred L. Roesler, Christoph R. Englert, Joel G. Cardon, Jeff Wimperis* .....**1:46**

Using Optics to Monitor Volcanoes, *Ulrike Willer, Christian Bohling, Wolfgang Schade* ....**3:18**

**320 Ultrafast Optics**

Relativistic Optics: A Gateway to Attosecond Physics, *Gérard A. Mourou, Victor Yanovsky* .....**5:40**

**330 Vision and Color**

Phakic Intraocular Lenses: The New Focus in Refractive Surgery, *G. Michael Morris, Lee T. Nordan* .....**9:26**

The Drive for Energy Efficient Lighting, *Graeme Lister* .....**1:20**

Wavefront-Guided LASIK  
*Jim Schwiegerling* .....**2:26**

**Authors**

Boas, Gary .....**1:52**  
Bohling, Christian .....**3:18**  
Callender, Odetta .....**5:22**  
Cardon, Joel G. ....**1:46**  
Childs, John .....**3:14**  
Chin, See Leang .....**9:44**  
Cohen, Kelly .....**3:14**  
Crawford, Gregory P. ....**8:26**  
Dai, Enwen .....**11:46**  
Dawes, Daniel .....**9:16**  
Dickey, Fred M. ....**11:28**  
Dickson, Robert M. ....**6:22**  
Dixon, Mark .....**3:14**  
Doerry, Armin W. ....**11:28**  
Douglass, Kim .....**6:28**  
Dupuis, Russell D. ....**4:30**  
Englert, Christoph R. ....**1:46**  
Erramilli, Shyamsunder .....**7:30**  
Friedman, Beth .....**7:24**  
Galvanauskas, Almantas .....**7:42**  
Gammon, Daniel .....**9:38**  
Golub, Michael A. ....**2:36**  
Greiner, Christoph M. ....**5:26**  
Happer, William .....**11:34**

Harlander, John M. ....**1:46**  
Hayden, Joseph S. ....**8:36**  
Hecht, Jeff. ....**4:20, 5:18**  
Hong, Mi K. ....**7:30**  
Hosseini, Abbas. ....**9:44**  
Iazikov, Dmitri. ....**5:26**  
Jang, Ju-Seog .....**4:36**  
Javidi, Bahram. ....**4:36**  
Johnston, Sean F. ....**7:36, 8:32**  
Kalogerakis, Georgios .....**9:20**  
Kawase, Kodo .....**10:34**  
Kazovsky, Leonid G. ....**9:20**  
Kelley, Paul L. ....**3:14**  
Kleinfeld, David .....**7:24**  
Kobayashi, Tetsuro .....**10:54**  
Kolstad, David .....**2:20**  
Lawall, John .....**10:40**  
Lee, Tae-Hee .....**6:22**  
Letellier, Vincent .....**2:30**  
Li, Xiaoqin .....**9:38**  
Lilienfeld, Pedro .....**6:32**  
Lister, Graeme. ....**1:20**  
Liu, Liren. ....**11:46**  
Liu, Weiwei .....**9:44**  
Luo, Qi .....**9:44**  
Lütkenhaus, Norbert. ....**3:24**  
Marhic, Michel E. ....**9:20**  
Morris, G. Michael .....**9:26**  
Mossberg, Thomas W. ....**5:26**  
Mourou, Gérard A. ....**5:40**  
Narukawa, Yukio .....**4:24**  
Neil, Iain A. ....**1:26**  
Nolte, David D. ....**10:48**  
Nordan, Lee T. ....**9:26**  
Pendry, John .....**9:32**  
Petersen, Christopher .....**2:20**  
Petty, Howard R. ....**1:40**  
Potma, Eric O. ....**11:40**  
Regnier, Fred E. ....**10:48**  
Roesler, Fred L. ....**1:46**  
Sato, Ken-ichi .....**5:34**  
Schade, Wolfgang .....**3:18**  
Schmitt, Joseph .....**2:20**  
Schwiegerling, Jim .....**2:26**  
Shacklette, Lawrence W. ....**11:22**  
Sham, Lu J. ....**9:38**  
Squier, Jeffrey. ....**7:24**  
Steel, Duncan .....**9:38**  
Stork, David G. ....**3:30**  
Suuberg, Eric M. ....**8:26**  
Swan, Anna .....**7:30**  
Takahara, Junichi. ....**10:54**  
Tsai, Philbert S. ....**7:24**  
Wang, Wei .....**11:46**  
Willer, Ulrike .....**3:18**  
Wimperis, Jeff .....**1:46**  
Wong, Kenneth K.-Y. ....**9:20**  
Wright, Gregory .....**1:34**  
Xie, X. Sunney .....**11:40**  
Yanovsky, Victor .....**5:40**  
Zhou, Changhe .....**11:46**

**Book Reviews**

(Reviewer's name in parentheses)

A Student's Guide to Fourier Transforms, *J. F. James* (Barry R. Masters).....**5:47**

An Engineering Introduction to Biotechnology, *J. Patrick Fitch* (Mircea Dragoman).....**7:49**

Basics of Holography, *P. Hariharan* (Dejan Pantelic).....**3:44**

Biomedical Optical Biopsy Classic Reprints on CD-ROM, Vol. 2 *R.R. Alfano, B.R. Masters* (Britton Chance).....**9:49**

Biomedical Photonics Handbook *Tuan Vo-Dinh, ed.* (Bogdan Hoanca).....**12:50**

Chaos-Based Digital Communication Systems *F. C. M. Lau, C. K. Tse* (K. Alan Shore).....**10:62**

Coherent Optics, 2<sup>nd</sup> ed., Fundamentals and Applications *Werner Lauterborn, Harald Upmeier, Thomas Kurz* (Salvador X. Bará).....**6:42**

Color Vision and Colorimetry Theory and Applications, *Daniel Malacara* (Dejan Pantelic) ....**6:40**

Digital Shearography, *Wolfgang Steinchen, Lianxiang Yang* (James C. Wyant).....**8:50**

Electromagnetic Scintillation Vol. I and II, *Albert D. Wheelon* (David Finsmith).....**5:48**

Electronic & Optoelectronic Properties of Semiconductor Structures, *Jasprit Singh* (David Finsmith).....**11:51**

Electro-Optical Imaging System Performance, 3rd ed., *Gerald C. Holst* (Jay Land).....**12:49**

Embedded Systems & Computer Architecture, *Graham R. Wilson* (Jizhong Chen).....**3:44**

Finite Element and Boundary Element Applications in Quantum Mechanics, *L. Ramdas Ram-Mohan* (Peter Enders).....**4:51**

Fractal and Wavelet Image Compression Techniques *Stephen T. Welstead* (Axel Mainzer Koenig).....**5:49**

Handbook of Optical Materials *Marvin J. Weber* (Steve M. Hong).....**7:48**

III-Nitride Semiconductors: Optical Properties I *M.O. Manasreh, X.C. Jiang* (Mircea Dragoman).....**6:41**

Integrated Optics Theory and Technology, *R. G. Hunsperger* (Jingyi Wang).....**4:51**

International Trends In Applied Optics, *Arthur H. Guenther* (Axel Mainzer Koenig).....**6:41**

Introduction to Geometrical Optics, *Milton Katz* (Christian Brosseau).....**10:63**

IP Over WDM, *Sudhir Dixit* (Bogdan Hoanca).....**4:50**

Laser in Environmental and Life Sciences, *Peter Hering, Jan Peter Lay, Sandra Stry* (K. Alan Shore).....**3:44**

Lasers in Ophthalmology, *Franz Fankhauser, Silwia Kwasniewska* (Jay M. Enoch).....**2:42**

Light-Matter Interaction, Vol. 1: Fundamentals and Applications *John Weiner, P. T. Ho* (Hiroshi Matakai).....**7:48**

Magnetism in the Solid State: An Introduction, *Peter Mohn* (Daniela Dragoman).....**1:56**

Optical Applications of Liquid Crystals, *L. Vicari, ed.* (Daniela Dragoman).....**11:51**

Optical Detection Theory for Laser Applications *Gregory R. Osche* (Manuel de la Cruz-Gutiérrez).....**1:56**

Optical Interference Coatings *N. Kaiser, H. K. Pulker* (Akhlesh Lakhtakia).....**10:62**

Optical Properties of Nanostructured Random Media *Vladimir M. Shalaev* (Hiroshi Matakai).....**2:43**

Optical Imaging and Microscopy Techniques and Advanced Systems *Peter Török, Fu-Jen Kao, eds.* (Barry R. Masters).....**12:50**

Optical Solitons—From Fibers to Photonic Crystals *Yuri Kivshar, Govind P. Agarwal* (David Finsmith).....**12:50**

Optical Solitons in Fibers, 3<sup>rd</sup> ed. *Akira Hasegawa, Masayuki Matsumoto* (Enze Yang).....**2:43**

Optics Learning by Computing With Examples Using MathCAD *K. D. Möller* (Dejan Pantelic).....**10:62**

Optoelectronics, *Emmanuel Rosencher, Borge Vinter* (Dejan Pantelic).....**4:51**

Optoelectronics of Solar Cells *Greg P. Smestad* (Alexander Moroz).....**6:40**

Opto-Mechatronic Systems Handbook, *Hyungsuck Cho* (K. Alan Shore).....**8:49**

Polarized Light In Fiber Optics *Edward Collett* (Christian Brosseau).....**10:63**

RF Photonic Technology In Optical Fiber Links, *William S. C. Chang, (Steve Hong)*.....**4:51**

Selected Papers on Ultrashort Laser Pulse Bioeffects *W. P. Roach, T. E. Johnson* (Barry R. Masters).....**10:64**

Selected Works of Emil Wolf, With Commentary (David L. Andrews).....**8:49**

Semiconductor Optoelectronic Devices, *Joachim Piprek* (Dan Northem).....**4:50**

Spy Capitalism: Itek and the CIA *Jonathan E. Lewis* (Robert R. Shannon).....**9:48**

Synchrotron Radiation, *Helmut Wiedemann* (Reva Garg).....**6:42**

The Science of Color, 2<sup>nd</sup> ed. *Steven Shevell* (Andrew Stockman).....**1:58**

Towards the First Silicon Laser *Lorenzo Pavesi, Sergey Gaponenko, Luca dal Negro, eds.* (Mircea Dragoman).....**11:51**

Ultrafast Lasers—Technology and Applications, *Martin E. Fermann, Almantas Galvanauskas, Gregg Sucha* (David Finsmith).....**5:49**

Wavelets in Signal Image Analysis, *Arthur A. Petrosian, François G. Meyer* (Axel Mainzer Koenig).....**7:49**

X-Ray Lasers 2002 *J. J. Rocca, J. Dunn, S. Suckewer* (K. K. Lee).....**5:48**

**Book Reviewers**

Andrews, David L.....**8:49**  
 Bará, Salvador X.....**6:42**  
 Brosseau, Christian.....**10:63**  
 Chance, Britton.....**9:49**  
 Chen, Jizhong.....**3:44**  
 De la Cruz-Gutiérrez, Manuel.....**1:56**  
 Dragoman, Daniela.....**1:56**  
   **6:41, 7:49, 11:51**  
 Enders, Peter.....**4:51**  
 Enoch, Jay M.....**2:42**  
 Finsmith, David.....**5:48**  
   **5:49, 11:51, 12:50**  
 Garg, Reva.....**6:42**  
 Hoanca, Bogdan.....**4:50, 12:50**  
 Koenig, Axel Mainzer.....**5:49**  
   **6:41, 7:49**  
 Lakhtakia, Akhlesh.....**10:62**  
 Land, Jay.....**12:49**  
 Lee, K. K.....**5:48**  
 Masters, Barry R.....**5:47**  
   **10:64, 12:50**  
 Matakai, Hiroshi.....**2:43, 7:48**  
 Moroz, Alexander.....**6:40**  
 Northem, Dan.....**4:50**  
 Pantelic, Dejan.....**3:44**  
   **4:51, 6:40, 10:62**  
 Shannon, Robert R.....**9:48**  
 Shore, K. Alan.....**3:44**  
   **8:49, 10:62**  
 Steve M. Hong.....**4:51, 7:48**  
 Stockman, Andrew.....**1:58**  
 Wang, Jingyi.....**4:51**  
 Wyant, James C.....**8:50**  
 Yang, Enze.....**2:43**