



## OSA's 2004 Fellows

**S**ixty-three outstanding scientists were elected to the class of Fellow by the OSA Board of Directors at the Society's annual meeting in October 2003. Many of the new Fellows will receive recognition at OSA meetings in 2004. Please join us in congratulating them.

**Mustafa A. G. Abushagur**  
Rochester Institute of Technology, Rochester, N.Y.  
*In recognition of contributions to optical signal processing and fiber telecommunications, and for pioneering engineering academic programs.*

**Peter A. Andrekson**  
Lehigh University, Bethlehem, Pa. and Chalmers University of Technology, Gothenburg, Sweden  
*For contributions to high-speed optical communications, in particular those related to applications of nonlinearities, parametric amplifiers and polarization-mode dispersion.*

**Oleg V. Angelsky**  
Chernivtsi University, Chernivtsi, Ukraine  
*For contributions to the development and dissemination of optical correlation techniques for the characterization of scattering objects and media.*

**Gaetano Assanto**  
Università degli Studi Roma Tre, Rome  
*For contributions to nonlinear integrated optics and optical spatial solitons.*

**Raymond J. Beach**  
Lawrence Livermore National Laboratory, Livermore, Calif.  
*For the development of diode-pumped solid-state lasers and the micro-channel cooled diode array.*

**David Jones Brady**  
Duke University, Durham, N.C.  
*For the development of three-dimensional optical systems for interferometric and tomographic imaging, computational sensing and information processing.*

**Jean-Luc E. Brédas**  
Georgia Institute of Technology, Atlanta  
*For contributions to the quantum-chemical description of nonlinear optical properties of molecules and molecular systems.*

**Thomas G. Brown**  
University of Rochester, Rochester, N.Y.  
*For contributions in nonlinear optics and unconventional optical polarization states.*

**José Capmany**  
Universidad Politécnica de Valencia, Valencia, Spain  
*For contributions to the field of photonic filters for microwave signal processing.*

**John L. Carlsten**  
Montana State University, Bozeman, Mont.  
*For fundamental studies of stimulated Raman scattering, including soliton formation, quantum noise and continuous wave Raman lasing.*

**Thomas F. Carruthers**  
Naval Research Laboratory, Washington, D.C.  
*For research on nonlinear effects in fiber lasers, soliton propagation in optical fibers and ultrafast interactions of light with semiconductors.*

**Yung-Jui (Ray) Chen**  
University of Maryland, Baltimore County, Baltimore  
*For contributions to the development of fiber communication devices and technologies, including wavelength division multiplexing and nonlinear optical switching.*

**Kent D. Choquette**  
University of Illinois Urbana-Champaign, Urbana, Ill.  
*For contributions to the development of semiconductor vertical cavity surface emitting laser diodes.*

**Valéria L. da Silva**  
Corning Inc., Corning, N.Y.  
*For the advancement of high-data-rate long distance optical communication systems.*

**Giacomo Mauro D'Ariano**  
Università di Pavia, Pavia, Italy  
*For contributions to the development of quantum tomographic methods, in particular the technique of optical homodyne tomography for characterizing the quantum state of nonclassical light sources.*

**Aristide C. Dogariu**  
University of Central Florida, Orlando, Fla.  
*For contributions towards the understanding of scattering, coherence and polarization.*

**Michael Downer**  
University of Texas, Austin  
*For contributions to nonlinear and ultrafast laser spectroscopy of solid-state surfaces and plasmas.*

**Majid Ebrahimzadeh**  
Institut de Ciències Fotoniques, Barcelona  
*For contributions to the advancement of optical parametric oscillators from the continuous-wave to the femtosecond time scales.*

**Henry O. Everitt III**  
U.S. Army Research Office, Research Triangle Park, N.C.  
*For creating and leading federally sponsored research programs in photonic band engineering and quantum information science.*

**Claude Fabre**  
Université Pierre et Marie Curie, Paris  
*For contributions to the understanding of the specific quantum properties of light.*

**James W. Fleming**  
OFS Fitel Laboratories, Murray Hill, N.J.  
*For contributions to the advancement of optical fiber materials, design and processing.*



**Alexander Luis Gaeta**

Cornell University, Ithaca, N.Y.  
*For research on the nonlinear propagation dynamics and applications of ultrashort laser pulses.*

**Daniel Gammon**

Naval Research Laboratory, Washington, D.C.  
*For contributions to spectroscopy of semiconductor quantum dots.*

**Sarah L. Gilbert**

National Institute of Standards and Technology, Boulder, Colo.  
*For the development of practical wavelength standards for optical communications systems.*

**Alan H. Gnauck**

Lucent Technologies, Bell Laboratories, Holmdel, N.J.  
*For demonstration of new optical transmission technologies.*

**Evan L. Goldstein**

University of Washington, Seattle  
*For contributions to the fundamental understanding of optically amplified multi-wavelength communication systems.*

**Naomi J. Halas**

Rice University, Houston  
*For the development of nanoparticles with tunable optical properties and their applications to optical sensing and medicine.*

**John H. Hong**

Jet Propulsion Laboratory, Pasadena, Calif.  
*For technical leadership in developing volume holographic data storage and information processing systems.*

**Ken Y. Hsu**

National Chiao Tung University, Hsinchu, Taiwan  
*For contributions to photorefractive optical neural networks, information processing, holographic memory and materials.*

**Sajeev John**

University of Toronto, Toronto, Ontario  
*For pioneering contributions to classical wave localization in disordered systems and the prediction and development of photonic bandgap crystals.*

**Charles H. Joyner Jr.**

Infinera, Sunnyvale, Calif.  
*For contributions to the development of optoelectronic devices and integration technologies in InP for fiber optic communication systems.*

**Daniel J. Kane**

Southwest Sciences Inc., Santa Fe, N.M.  
*For the development of frequency-resolved optical gating.*

**Shashi P. Karna**

Army Research Laboratory, Aberdeen Proving Ground, Md.  
*For advancing understanding of the origin and mechanisms of nonlinear optical phenomena in molecules and nanoclusters.*

**Victor I. Klimov**

Los Alamos National Laboratory, Los Alamos, N.M.  
*For pioneering studies of ultrafast dynamical processes in nanocrystal quantum dots and for the development of fundamental principles of nanocrystal lasing.*

**William P. Latham**

Air Force Research Laboratory, Kirkland AFB, N.M.  
*For contributions in laser design and analysis, laser applications, cooperative initiatives and optics education.*

**Paul D. Lett**

National Institute of Standards and Technology, Gaithersburg, Md.  
*For the development of photo-associative spectroscopy as a tool for studying interactions between ultracold atoms.*

**Gerd Leuchs**

Universität Erlangen-Nürnberg, Erlangen, Germany  
*For contributions to the fields of nonclassical radiation and optical super-resolution.*

**Shawn-Yu Lin**

Sandia National Laboratories, Albuquerque, N.M.  
*For contributions to the development of two-dimensional and three-dimensional photonic crystals for communication and energy applications.*

**Mark A. Linne**

Lund Institute of Technology, Lund, Sweden  
*For contributions to laser diagnostics in combustion, imaging, laser development and optics education for engineers.*

**Christi K. Madsen**

Lucent Technologies Inc., Murray Hill, N.J.  
*For contributions to optical waveguide circuit design and implementation, especially tunable dispensators for high capacity optical networking systems.*

**Seth R. Marder**

University of Arizona, Tucson, Ariz.  
*For contributions to the development of structure-property relationships for organic photonic materials.*

**Joseph C. Marron**

Corning Inc., Pittsford, N.Y.  
*For contributions to the science of coherent imaging and the invention of holographic laser radar.*

**Jabez Jenkins McClelland**

National Institute of Standards and Technology, Gaithersburg, Md.  
*For contributions to atom optics, including the fabrication of stable structures by direct-write atomic lithography.*

**Michael I. Mishchenko**

NASA Goddard Institute for Space Studies, New York, N.Y.  
*For contributions to the theory of light scattering and radiative transfer and its applications in remote sensing.*





**Jerome V. Moloney**  
University of Arizona,  
Tucson, Ariz.  
*For development of mathematical methodologies for the investigation of complex spatiotemporal phenomena in nonlinear optics and lasers.*

**Luis A. Orozco**  
University of Maryland,  
College Park, Md.  
*For studies of quantum states of the electromagnetic field through wave-particle correlations that relate squeezing and Schwartz inequality violations.*

**Marek A. Osiński**  
University of New Mexico,  
Albuquerque, N.M.  
*For contributions to the theory and simulation of semiconductor lasers.*



**Ci-Ling Pan**  
National Chiao Tung University,  
Hsinchu, Taiwan  
*For contributions to ultrafast optoelectronics, tunable and multiwavelength lasers, as well as leadership of optics and photonics research and education.*

**Stephen Colby Rand**  
University of Michigan,  
Ann Arbor, Mich.  
*For the invention of novel solid-state lasers, such as the diamond laser, mode-locked upconversion lasers and laser phosphors.*

**Manijeh Razeghi**  
Northwestern University,  
Evanston, Ill.  
*For pioneering work on optoelectronic quantum devices.*

**Jannick P. Roland**  
University of Central Florida,  
Orlando, Fla.  
*For contributions to image quality assessment techniques for medical imaging and for optics in virtual environments.*

**José M. Sasián**  
University of Arizona,  
Tucson, Ariz.  
*For innovations in optical design and for teaching and mentoring of students.*

**Anurag Sharma**  
Indian Institute of Science and  
Technology, New Delhi  
*For development of computational methods for guided-wave optical components and gradient index optical imaging systems.*

**Joseph A. Shaw**  
Montana State University,  
Bozeman, Mont.  
*For leadership in optical remote sensing of the environment and promotion of broad appreciation of natural optics.*

**Arlee V. Smith**  
Sandia National Laboratories,  
Albuquerque, N.M.  
*For contributions to the field of nonlinear optics.*

**Atul Srivastava**  
Onetta Inc., Piscataway, N.J.  
*For contributions to advances in high capacity, long haul, dense wavelength division multiplexed transmission systems.*

**John C. Stephenson**  
National Institute of  
Standards and Technology,  
Gaithersburg, Md.  
*For contributions to laser spectroscopy of chemical systems, notably to the study of vibrational modes and their dynamics in molecules in the gas phase and at surfaces.*

**Chi-Kuang Sun**  
National Taiwan University,  
Taipei, Taiwan  
*For contributions in the field of ultrafast phenomena, terahertz spectroscopy and microscopy.*

**Grover A. Swartzlander Jr.**  
University of Arizona,  
Tucson, Ariz.  
*For experimental discoveries in linear and nonlinear optics, including the optical vortex soliton, coherence filtering techniques and fluid-like optical phenomena.*

**Kenneth J. Voss**  
University of Miami,  
Coral Gables, Fla.  
*For significant contributions to oceanic and atmospheric optics, particularly in the development of novel experiments and instrumentation.*

**Lihong V. Wang**  
Texas A&M University,  
College Station, Texas  
*For contributions to biomedical optics.*

**Lijun Wang**  
NEC Research Institute,  
Princeton, N.J.  
*For original experimental research revealing new optical propagation and coherence phenomena.*

**George R. Welch**  
Texas A&M University,  
College Station, Texas  
*For experimental contributions to coherent atomic effects, particularly lasing without inversion and ultraslow light.*