OSA

William R. Hunter
1924-2012

William R. Hunter, an OSA Fellow Emeritus and an internationally renowned physicist at the U.S. Naval Research Laboratory (NRL) from 1952 to 1980, died on 4 February 2012 in Fairfax, Va., U.S.A., at the age of 87.

Hunter's research in optics was essential for the development of innovative rocket and satellite instrumentation that recorded the first high-resolution images and spectra of the Sun in the extreme ultraviolet (EUV) and far ultraviolet (FUV) wavelength regions. His papers in scientific journals gained widespread respect, and he mentored a generation of scientists in the areas of thin films, diffraction gratings and calibrations of spaceflight instruments using synchrotron radiation.

Hunter earned an M.S. in physics from the University of Florida in 1949, following service in the U.S. Navy during World War II. In 1953, he was hired by Richard Tousey to join the Rocket Spectroscopy Branch of NRL's Optics Division (later the Atmosphere and Astrophysics Division and the Space Science Division). He led the development of highly reflective coatings for the mirrors and gratings that were used to image and disperse solar FUV radiation, and thin metal filters that were transmissive to the FUV radiation and blocked the bright visible light from the sun.

In 1959, Hunter and his team won the Photographic Society of America's Progress Medal for recording spectroheliograms, the first high-resolution images of the entire Sun at a discrete FUV wavelength. The goal of his team's research was to relate the emission patterns in the solar chromosphere to events like flares that were believed to cause distrubances in the Earth's upper atmosphere.

At Bauch + Lomb, Hunter developed large normal-incidence gratings that greatly reduced scattered light, enabling improved contrast in the recorded spectral images. During his stint at the Luxell Corporation, Hunter developed thin aluminum filters with improved stability. These filters could survive the vibrations of the Saturn V rocket launch of the Skylab spacestation, which carried an NRL spectroheliograph. In order to accurately evaluate these gratings and filters, Hunter developed an Optical Grating Reflection Evaluator (OGRE) system and an improved light source that became known in the EUV community as the "Hunter lamp."

Hunter retired in 1980, but he continued his work in optics as a defense contractor until 2008.

An accomplished violist, for many years he played as a member of the Fairfax symphony orchestra and in a string quartet. He enjoyed traveling and made numerous family trips to remote Cape Breton Island, Nova Scotia, home to his mother's family. Hunter is survived by his wife of 63 years, Dorothy; four children; seven grandchildren and eight great-grandchildren.

This obituary was contributed by OSA Fellow John Seely.

Guoguang Mu
1931-2012

Guoguang Mu, an OSA Fellow and early pioneer of optics, applied optics and optical instrumentation in China, died on 12 April 2012 in Tianjin. He was 81.

Mu was the founder and director of Nankai University's Institute of Modern Optics, the first higher education institution in China to offer Ph.D. degrees in both optics and optical engineering. He served as president of the University from 1985 to 1995.

Mu was born in Jinxi (now Hu Lu Dao City), Liao Ning Province, in 1931. He graduated from the physics department of Nankai University in 1952. During his career, he made distinguished contributions to white light information processing and designed many novel optical instruments. He also introduced important concepts and technologies in pattern recognition, color image coding and decoding, and color photography. In 1983, he succeeded in using black and white film to refract color images. He was also well-known as the co-author (with Yuan Lin Zhan) of the book *Optics*, one of the most widely used optics textbooks in China.

Mu published more than 100 scientific research papers in internationally renowned optical journals and held two patents. He served as president of the Chinese Optical Society from 1993 to 2005, and as vice president of the International Commission for Optics. An OSA member since 1981, Mu was named a Fellow in 1990; he was also a Fellow of SPIE. In 1991, he was elected a member of the Chinese Academy of Sciences, and in 1994 he was elected as a Fellow of the Academy of Sciences for the Developing World. He received three national scientific and technological prizes and the Ho Leung Ho Lee Prize for exceptional Chinese scientists.

OSC/Arizona

Douglas S. Goodman
1947-2012

Douglas S. Goodman, an OSA Fellow Emeritus known for his contributions to optics education, died on 14 May 2012 in Memphis, Tenn., U.S.A., after a long battle with Parkinson's disease. He was 65.

Goodman received a Ph.D. in optics in 1979 from the University of Arizona Optical Sciences Center, where his advisor was Roland Shack. He then joined IBM Research in Yorktown Hts., N.Y. After leaving IBM in 1993, he began work in the Polaroid Corporation optical engineering department. In 2002, he joined Corning Tropel as a senior scientist. He also served as an adjunct professor at the University of Arizona College of Optical Sciences and as an adjunct faculty member at the University of Rochester Institute of Optics.

Goodman's research spanned many topics, including image formation, illumination, photolithography, phase-shifting masks, alignment, metrology, optical inspection, machine vision, microscopy, optical testing, laser ablation, focus sensing, laser print heads, optomechanics, optical systems engineering and the theory of classical optics. He was keenly interested in education and the power of demonstrations to arouse curiosity. He explored the use of overhead projectors in optics demonstrations and was the author of *Optics Demonstrations with the Overhead Projector*. He also wrote two book chapters: "Survey of Optical Instruments" in *Geometrical and Instrumental Optics*, and "Geometrical Optics" in *Handbook of Optics*.

An OSA member since 1977, Goodman was named a Fellow in 1990. He received OSA's Esther Hoffman Beller Medal in 2001 "for his passion and delight for learning and education." He was also a Fellow of SPIE.

Goodman is survived by his wife, Carolyn Wenk-Goodman, a concert violinist and a teacher at the Rochester Institute of Technology (RIT), and a daughter, Sarah.

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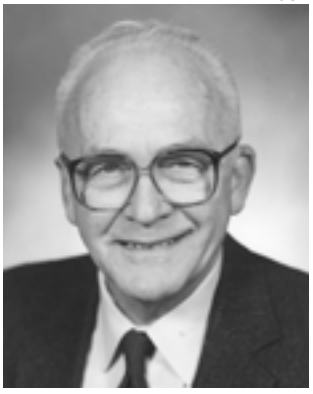

Elias Snitzer
1925-2012

Elias Snitzer, an OSA Fellow Emeritus known for his pioneering contributions to fiber optics technology, died 21 May 2012 in Boston, Mass., U.S.A. He was 87.

He received his M.A. (1950) and Ph.D. (1953) in physics from the University of Chicago, where he took classes from Enrico Fermi. Known as the "Father of the Glass Laser," Snitzer demonstrated the device in 1961.

He began teaching at the Lowell Technological Institute in 1956, but his career stalled in 1958 when he was called to testify before the House Un-American Activities Committee, an investigative committee of the U.S. House of Representatives. Snitzer later recalled that "(I) was subpoenaed to appear before the House Un-American Activities Committee as a consequence of the fact that I had been very heavily involved in left-wing politics as a student at the University of Chicago... I was at Lowell Tech at the time that I was subpoenaed... I (subsequently) lost my job. That case was taken up by the AAUP and it was finally settled (in my favor) some years later... It was a very difficult time because my wife was pregnant with our fifth child."

Eventually, Snitzer was hired by American Optical and began his work in optical fibers and lasers. In 1961, he published in JOSA a theoretical description of single mode fibers—a fiber with a core so small it could carry light with only one waveguide mode. He later reported the first operation of an Nd:glass laser and demonstrated the first optical fiber laser and fiber amplifier.

In 1989, he joined the ceramic science and engineering faculty of Rutgers University, where he continued to teach and research until retiring in 2001. At Rutgers, he developed a Pr-fluoride:glass fiber laser amplifier and a mask fabrication of fiber Bragg gratings. In 1992, along with one of his students, Snitzer established Photo Refractive Enterprises, Inc., to commercially develop mask fabrication of fiber Bragg gratings.

Snitzer was named an OSA Fellow in 1964. His numerous awards and honors include the Charles Hard Townes Award (1991) and the John Tyndall Award (1994). He was elected to the U.S. National Academy of Engineering in 1979 for the invention of the glass laser and the fiber-optics laser. The American Ceramic Society honored him with the Morey Award for glass science (1971) and as the inaugural recipient of the Stookey Award, given for a lifetime of innovative exploratory work.

Snitzer enjoyed being with family, was an avid tennis player and loved the ocean. He is survived by five children, 10 grandchildren and five great-grandchildren. His wife, Dr. Shirley (Wood) Snitzer, passed away in 2009.

If you would like to make a memorial donation to the OSA Foundation in honor of Doug Goodman, William Ray Hunter, Guoguang Mu or Elias Snitzer, please visit www.osa-foundation.org/give.