

IEEE DAVID SARNOFF AWARD
RECIPIENTS

2017 – NOT AWARDED

2016 – HIROYUKI MATSUNAMI
Professor Emeritus, Kyoto
University, Yawata, Kyoto, Japan

“For contributions to the development of silicon carbide (SiC) crystals and devices for advanced power electronics.”

2015 - PALLAB BHATTACHARYA
Charles M. Vest Distinguished
University Professor and James R.
Mellor Professor of Engineering,
University of Michigan, Ann Arbor,
Michigan, USA

“For contributions to near-infrared and visible quantum dot lasers.”

2014 - LARRY A. COLDREN
Fred Kavli Professor of
Optoelectronics and Sensors,
University of California at Santa
Barbara, Santa Barbara, California,
USA

“For contributions to semiconductor lasers and photonic integrated circuits.”

2013 - SAJEEV JOHN
University Professor, Department of
Physics, University of Toronto,
Toronto, Ontario, Canada

“For the conception and development of light-trapping crystals and for leadership in elucidating their properties and applications in photonics.”

2012 - HIDEO OHNO
Professor at Laboratory for
Nanoelectronics and Spintronics,
Research Institute of Electrical
Communication and Director of
Center for Spintronics Integrated
Systems, Tohoku University,
Sendai, Japan

“For seminal contributions and leadership in bridging semiconductor electronics with magnetism and spintronics.”

2011 – CONSTANCE J. CHANG-HASNAIN
John R. Whinnery Chair Professor of
Electrical Eng. and Computer
Science
University of California
Berkeley, CA, USA

“For her pioneering contributions to vertical cavity surface emitting laser (VCSEL) arrays and tunable VCSELs.”

2010 – MARK RODWELL
Professor, Dept of Elec and Comp
Engrg, Univ of California, Santa
Barbara
Santa Barbara, CA, USA

“For development of millimeter-wave and sub-millimeter-wave InP bipolar transistors and integrated circuits.”

2009 – YASUHIKO ARAKAWA
Professor, Research Center for

“For seminal contributions to improved dynamics of quantum well semiconductor

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- Advanced Science and Technology, lasers."
Tokyo, Japan
- AND
KAM-YIN LAU
Professor, EECS, Univ of California,
Berkeley, CA, USA
- AND
KERRY J. VAHALA
Jenkins Professor, Applied Physics,
California Institute of Technology,
Pasadena, CA, USA
- 2008 - JAMES COLEMAN "For leadership in the development of
University of Illinois at Urbana- highly reliable strained-layer lasers"
- Champaign, Intel Alumni Endowed
Chair in Electrical and Computer
Engineering,
Urbana, IL, USA
- 2007 – UMESH K. MISHRA "For development of gallium nitride
ECE Department, University of electronics."
- California,
Santa Barbara, CA, USA
- 2006 - MAU-CHUNG FRANK CHANG "For development of HBT power amplifiers
Professor, Electrical Engineering leading to their commercialization in
Department, UCLA, wireless communications."
- Los Angeles, CA, USA
- 2005 – PIERRE TOURNOIS "For pioneering contributions to pulse
Co-Founder & Scientific Director compression devices and the invention of
Fastlite Company the Acousto-Optic Programmable
Palaiseau, France Dispersive Filter."
- 2004 – FREDERICK A. KISH "For his key role in the development of
Engineering Vice President high efficiency transparent substrate light
Lepton Networks emitting diodes and their commercial
Cupertino, CA, USA realization."
- 2003 - PETER ASBECK "For development and applications of
Professor, Electrical and Computer GaAs-based heterojunction bipolar
Engineering Dept, University of transistors."
- California,
San Diego, CA, USA

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- 2002 – YOUNG-KAI CHEN
Lucent Technologies
Murray Hill, NJ, USA
"For contributions to ultrahigh speed heterostructure transistors and seminal work on colliding pulse mode-locked semiconductor lasers."
- 2001 - PAUL D. DAPKUS
University of Southern California
Los Angeles, CA , USA
"For contributions both to the establishment of MOCVD as a dominant technology for epitaxial materials growth and to the first MOCVD quantum well laser."
- 2000 - ALASTAIR MALCOLM GLASS
Bell Laboratories/Lucent
Technologies
Murray Hill, NJ, USA
"For pioneering research on electro-optical materials and photorefractive phenomena, and for leadership in development of Wavelength Division Multiplexing (WDM) components."
- 1999 - GERARD A. MOUROU
University of Michigan
Ann Arbor, MI, USA
"For pioneering contributions to high-speed, high-intensity optoelectronic measurement techniques, including electro-optic sampling and femtosecond high-voltage switching."
- 1998 -TATSUO IZAWA
Nippon Telegraph and Telephone
Corp.
Kanagawa, Japan
"For contributions to vapor phase axial deposition for optical fiber fabrication."
- 1997 - MILTON FENG
University of Illinois
Urbana, IL, USA
"For contributions to the theoretical and experimental understanding of the fundamental speed limitations of MESFETs and HEMTs."
- 1996 - HIROYUKI SAKAKI
University of Tokyo
Tokyo, Japan
"For pioneering studies of quantum effects in semiconductor microstructures."
- 1995 - KARL HESS
Beckman Inst. - Univ. of Illinois
Urbana, IL, USA
"For contributions to high field transport and real space transfer effects in semiconductor heterolayer structures."
- 1994 - WON-TIEN TSANG
AT&T Bell Laboratories
Murray Hill, NJ, USA
"For innovative contributions to the design of novel quantum well semiconductor lasers and to epitaxial growth processes."
- 1993 - RAO R. TUMMALA
IBM Corp.
Hopewell Junction, NY, USA
"For development of high density, high performance multichip packages for computer applications."

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- 1992 - J. JIM HSIEH
Lasertron Inc.
Burlington, MA, USA
"For the invention and commercialization of the GaInAsP semiconductor laser for fiber-optic communications."
- 1991 - FEDERICO CAPASSO
AT&T Bell Laboratories
Murray Hill, NJ, USA
"For pioneering contributions to heterostructure devices through the use of bandgap engineering techniques."
- 1990 - LEROY L. CHANG
IBM Corp.
Yorktown Heights, NY, USA
"For pioneering contributions to the realization and development of quantum wells and superlattices."
- 1989 - HERWIG KOGELNIK
AND
CHARLES V. SHANK
AT&T Bell Laboratories,
Holmdel, NJ, USA
"For invention of the distributed feedback laser, and contributions to integrated optics and fiber communications."
- 1988 - IZUO HAYASHI
Optoelectronics Joint Res. Lab.
Kawasaki, Japan
"For contributions to III-V semiconductors and device technology."
- 1987 - FRANK F. FANG
AND
ALAN B. FOWLER
IBM Corp.,
Yorktown Heights, NY, USA
"For contributions to MOSFET device physics and two-dimensional electron systems."
- 1986 - YASUHARU SUEMATSU
Tokyo Inst. of Tech.
Tokyo, Japan
"For contributions to semiconductor lasers and integrated optics for optical fiber communications."
- 1985 - HENRY KRESSEL
E.M. Warburg, Pincus & Co.
New York, NY, USA
"For outstanding contributions to electro-optic semiconductor devices."
- 1984 - JAMESON D. RIGDEN
Delta Development Ltd.
Norfolk, England
AND
ALAN D. WHITE
White Associates
Berkely Heights, NJ, USA
"For invention of the visible light helium-neon laser."
- 1983 - HERMANN K. GUMMEL
AT&T Bell Laboratories
Murray Hill, NJ, USA
"For contributions and leadership in device analysis and development of computer-aided design tools for semiconductor devices and circuits."

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- 1982 - NOBUTOSHI KIHARA
SONY Corp.
Tokyo, Japan
"For major contributions to magnetic video tape recording."
- 1981 - CYRIL HILSUM
Royal Signals & Radar Establ.
Malvern, England
"For contributions in the fields of III-V compound semiconductors, solid state microwave components and display devices."
- 1980 - MARSHALL I. NATHAN
IBM Corp.
Yorktown Heights, NY, USA
"For his role in the discovery of the injection laser, and other contributions to the physics of semiconductor devices."
- 1979 - A. GARDNER FOX
AND
TINGYE LI
Bell Labs.,
Holmdel, NJ, USA
"For the discovery of modes in open structures and their applications to laser resonators."
- 1978 - STEPHEN E. HARRIS
Stanford University
Stanford, CA, USA
"For scientific discoveries and device inventions in the fields of lasers, quantum electronics and non-linear optics."
- 1977 - JACK M. MANLEY
University of Wisconsin,
Madison, WI, USA
AND
HARRISON E. ROWE
Bell Laboratories,
Holmdel, NJ, USA
"For their work on the properties of nonlinear devices resulting in the well-known Manley Rowe Relations."
- 1976 - GEORGE HARRY HEILMEIER
Defense Adv. Res. Project Agy.
Arlington, VA, USA
"For combining science with engineering to create the dynamic scattering liquid crystal display."
- 1975 - BERNARD C. DELOACH, JR.
Bell Telephone Laboratories
New Providence, NJ, USA
"For contributions to and leadership in the development of the impact avalanche and transit time (IMPATT) device."
- 1974 - FREDERIK L. J. SANGSTER
Phillips Research Laboratories
Eindhoven, the Netherlands
"For the invention of the integrated bucket-brigade delay line and ingenuity in finding new realizations and applications of this principle."
- 1973 - MAX VERNON MATHEWS
Bell Telephone Laboratories
Murray Hill, NJ, USA
"For leadership in applying electronics to art and for his contribution to the production of musical sounds by computer."

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- 1972 - EDWARD G. RAMBERG
RCA Laboratories
Princeton, NJ, USA
"For outstanding contributions to electron physics, electron optics and television."
- 1971 - ALAN L. MCWHORTER
Massachusetts Institute of Technology,
Cambridge, MA, USA
"For outstanding contributions leading to a better understanding of semiconductor devices."
- 1970 - JOHN BERTRAND JOHNSON
McGraw-Edison Company
West Orange, NJ, USA
"For fundamental contributions of major importance to electronics and communications."
- 1969 - ROBERT H. REDIKER
Massachusetts Institute of Technology,
Cambridge, MA, USA
"For contributions to semiconductor device research and injection lasers."
- 1968 - WALTER P. DYKE
Field Emission Corporation
McMinnville, OR, USA
"For pioneering contributions to the development of field emission in X-ray technology."
- 1967 - JAMES HILLIER
RCA Laboratories
Princeton, NJ, USA
"For his pioneering research on the electron microscope, including both electron optics and biological microscopy, and for his accomplishments as a research director and his inspiration to scientists - young and old."
- 1966 - JACK S. KILBY
Texas Instruments Inc.
Dallas, TX, USA
"For his outstanding creative contribution in the field of monolithic integrated circuits, for his key inventions and for his team leadership in the application of integrated circuits to large scale systems."
- 1965 - JACK A. MORTON
Bell Telephone Laboratories
Murray Hill, NJ, USA
"For his outstanding leadership and contributions to the development and understanding of solid-state electron devices."
- 1964 - HENRI BUSIGNIES
International Telephone & Telegraph
New York, NY, USA
"For outstanding contributions to electronic systems especially in the fields of direction finding and air navigation."
- 1963 - ROBERT N. HALL
General Electric Company
Schenectady, NY, USA
"For his outstanding contributions to the scientific understanding of semiconductors and for their applications to electronics."
- 1962 - HARRY B. SMITH
"For his contributions to the field of

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Westinghouse Electric Corporation Baltimore, MD, USA	Doppler radar and other areas of applied electronics."
1961 - CHARLES H. TOWNES	"For research in resonance physics leading to major advances in communication technology."
1960 - RUDOLF KOMPFFNER Bell Telephone Laboratories Holmdel, NJ, USA	"For creative achievements in research and development in the field of electronics and for his leadership in this field."
1959 - DAVID SARNOFF Radio Corporation of America New York, NY, USA	"This special inaugural award of the David Sarnoff Medal is made to David Sarnoff October 7, 1959, on the 75 th Anniversary of the first technical meeting of AIEE, in recognition of his inspiring and courageous leadership in the advancement of the art and science of electronics."