

## **IEEE ANDREW S. GROVE AWARD**

### **RECIPIENTS**

(Formerly the IEEE Jack A. Morton Award)

- 2022 – HEIKI RIEL  
IBM Fellow, Lead IBM Research  
Quantum Europe & Africa, Zurich,  
Switzerland  
“For contributions to materials for  
nanoscale electronics and organic light-  
emitting devices.”
- 2021 – HIDEAKI AOCHI  
Senior Expert, Institute of Memory  
Technology Research and  
Development, Kioxia Corporation,  
Kanagawa, Japan  
“For pioneering and sustained  
contributions to high-density, three-  
dimensional flash memory.”
- AND  
RYOTA KATSUMATA  
Deputy General Manager,  
Advanced Memory Development  
Center, Kioxia Corporation, Mie,  
Japan
- AND  
MASARU KITO  
Group Manager, Advanced Memory  
Development Center, Kioxia  
Corporation, Mie, Japan
- 2020 – EVELYN L. HU  
Tarr-Coyne Professor  
of Applied Physics and Electrical  
Engineering, John A. Paulson  
School of Engineering and Applied  
Sciences, Harvard University,  
Cambridge, Massachusetts, USA  
“For pioneering contributions to  
microelectronics fabrication technologies  
for nanoscale and photonic devices.”
- 2019 – DIGH HISAMOTO  
Chief Senior Scientist,  
Hitachi; Ltd., Tokyo, Japan  
“For pioneering work in the manufacturing  
of three-dimensional double-gate MOSFET  
devices.”
- 2018 - GURTEJ S. SANDHU  
Senior Fellow, Director, Emerging  
Memory Technologies R&D, Micron  
Technology Inc., Boise, Idaho, USA  
“For contributions to silicon CMOS process  
technology that enable DRAM and NAND  
memory chip scaling.”
- 2017 - SORIN CRISTOLOVEANU  
Director of Research, The French  
National Centre for Scientific  
Research, Grenoble, France  
“For contributions to silicon-on-insulator  
technology and thin body devices.”
- 2016 – CARLOS H. DÍAZ  
Director, Advanced Logic  
Technology Development, Taiwan  
Semiconductor Manufacturing Co.,  
“For sustained contributions to and  
leadership in foundry advanced CMOS logic  
transistor technology.”

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Hsinchu, Taiwan

- 2015 - MASAYOSHI ESASHI  
Professor, Tohoku University,  
Sendai, Miyagi, Japan  
"For developments in micro-electro-mechanical systems (MEMS) used in transportation and industrial electronics."
- 2014 - SANJAY BANERJEE  
Cockrell Regents Chair Professor of  
Electrical and Computer Engineering  
and Director, Microelectronics  
Center, University of Texas,  
Austin, Texas, USA  
"For contributions to column-IV MOSFETs and related materials processing."
- 2013 - SHINICHI TAKAGI  
Full Professor, The University of  
Tokyo, Tokyo, Japan  
"For contributions to the understanding of transport properties in inversion layers of high-performance MOSFETs."
- 2012 - JEAN-PIERRE COLINGE  
Head of the Micro-Nano Electronics  
Centre, Tyndall National Institute,  
University College Cork  
Cork, Ireland  
"For contributions to silicon-on-insulator devices and technology."
- 2011 - JUDY HOYT  
Professor, Massachusetts Institute of  
Technology,  
Cambridge, MA, USA  
"For seminal contributions to the demonstration of Si/Ge lattice mismatch strain engineering for enhanced carrier transport properties in MOSFET devices."
- AND  
EUGENE A. FITZGERALD  
Merton C. Flemings SMA Professor of  
Materials Engineering,  
Massachusetts Institute of  
Technology,  
Cambridge, MA, USA
- 2010 - BIJAN DAVARI  
IBM Fellow, Vice President  
IBM Corporation  
Yorktown Heights, NY, USA  
"For contributions to high performance deep-submicron CMOS technology."
- 2009 - ERIC FOSSUM  
Chairman & CEO, Siimpel  
Corporation,  
Arcadia, CA, USA  
"For significant contributions to the invention, development and commercialization of CMOS image sensors."
- 2008 - STEFAN LAI  
"For contributions in developing Flash memory into a main stream non-volatile

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| Retired Vice President, Technology & Manufacturing Group, Intel Corporation,<br>Santa Clara, CA, USA                               | memory and the development of multiple generations of Flash memory technologies"        |
| 2007 - JAMES D. PLUMMER<br>Dean of Engineering<br>Stanford University,<br>Stanford, CA, USA  | "For seminal contributions to the modeling, simulation and physics of silicon devices." |
| 2006 - CHANG-GYU HWANG<br>President and CEO of<br>Samsung Electronics Co, Ltd<br>Gyeonggi-Do, Korea                                | "For contributions to the development of advanced memory products."                     |
| 2005 - TSO-PING MA<br>Raymond John Wean Professor and<br>Chairman of Electrical Engineering<br>Yale University, New Haven, CT, USA | "For contributions to the development and understanding of CMOS gate dielectrics."      |
| 2004 - KRISHNA SARASWAT<br>Professor, Dept of Electrical Engrg<br>Stanford University,<br>Stanford, CA, USA                        | "For seminal contributions to silicon process technology."                              |
| 2003 - MARK BOHR<br>Fellow, Director of Process<br>Architecture & Integration<br>Intel Corporation,<br>Hillsboro, OR, USA          | "For leadership in scaling of advanced CMOS technology for microprocessors."            |
| 2002 - DIMITRI A. ANTONIADIS<br>Massachusetts Institute of<br>Technology<br>Cambridge, MA, USA                                     | "For seminal contributions to field-effect devices and silicon process modeling."       |
| 2001 - AL F. TASCH, JR.<br>University of Texas at Austin,<br>Austin, TX, USA   | "For contributions to MOS technology, and ion implantation and device modeling."        |

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**Beginning with the year 2001,  
the Jack A. Morton Award was renamed the [IEEE Andrew S. Grove Award](#)**

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| 2000 - WOLFGANG FICHTNER<br>Swiss Federal Institute of<br>Technology<br>Zurich, Switzerland | "For outstanding contributions to semiconductor device simulations." |
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- 1999 - CHARLES H. HENRY  
Lucent Technologies, Bell  
Laboratories  
Murray Hill, NJ  
"For fundamental contributions to the understanding of the optical properties of quantum wells and semiconductor lasers."
- 1998 - ISAMU AKASAKI  
Meijo University  
Nagoya, Japan  
"For contributions in the field of group-III nitride materials and devices."
- AND  
SHUJI NAKAMURA  
Nichia Chemical Industries, Ltd.  
Tokushima, Japan
- 1997 - CHENMING HU  
University of California  
Berkeley, CA, USA  
"For outstanding contributions to the physics and modeling of MOS device reliability."
- 1996 - ROBERT W. DUTTON  
Stanford University  
Stanford, CA, USA  
"For seminal contributions to semiconductor process and device modeling."
- 1995 - YOSHIO NISHI  
Hewlett-Packard Company  
Palo Alto, CA, USA  
"For contributions to the basic understanding and innovative development of MOS device technology."
- 1994 - ROBERT E. KERWIN  
AT&T  
Warren, NJ, USA  
"For pioneering work and the basic patent on the self-aligned silicon-gate process, a key element in fabrication of very large scale integrated circuits."
- AND  
DONALD L. KLEIN  
IBM Corporation  
Hopewell Junction, NY, USA
- AND  
JOHN C. SARACE  
Rockwell International  
Anaheim, CA, USA
- 1993 - TOSHIHISA TSUKADA  
Hitachi, Ltd.  
Tokyo, Japan  
"For contributions to the discovery and development of Buried Heterostructure (BH) semiconductor lasers."
- 1992 - TAKUO SUGANO  
University of Tokyo  
Tokyo, Japan  
"For contributions to Metal-Insulator-Semiconductor Devices and Technology."

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- 1991 - TAK H. NING  
HWA N. YU  
IBM Corporation  
Yorktown Height, NY, USA  
"For contributions to the development of advanced bipolar and MOS devices."
- 1990 - GREGORY E. STILLMAN  
University of Illinois  
Urbana, IL  
and CHARLES M. WOLFE  
Washington University  
St. Louis, MO, USA  
"For the growth and characterization of ultra-high purity gallium arsenide and related compounds."
- 1989 - CHIH-TANG SAH  
University of Illinois  
Urbana, IL, USA  
"For contributions to the understanding of semiconductor defects and the physics of MOS devices."
- 1988 - FRANK STERN  
IBM Corp.  
Yorktown Heights, NY, USA  
"For contributions to the theory of injection lasers and two-dimensional electron gases."
- 1987 - DENNIS D. BUSS  
AND  
RICHARD A. CHAPMAN  
AND  
MICHAEL A. KINCH  
Texas Instruments  
Dallas, TX, USA  
"For the demonstration and development of mercury cadmium telluride monolithically- integrated charge-coupled device focal plane arrays."
- 1986 - HERBERT KROEMER  
University of California  
Santa Barbara, CA, USA  
"For pioneering the theory and device applications of semiconductor heterostructures."
- 1985 - ROBERT D. BURNHAM  
AND  
WILLIAM STREIFER  
Xerox Corp.  
Palo Alto, CA, USA  
AND  
DONALD R. SCIFRES  
Spectra Diode Laboratories  
San Jose, CA, USA  
"For contributions to electrically pumped distributed feedback lasers and high-power phased-locked laser arrays."
- 1984 - HANS S. RUPPRECHT  
AND  
JERRY M. WOODALL  
IBM Corp.  
Yorktown Heights, NY, USA  
"For pioneering work in gallium aluminum arsenide heterojunctions and high efficiency light emitting diodes and injection lasers prepared by liquid phase epitaxy."

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| 1983 - JUN-ICHI NISHIZAWA<br>Tohoku University<br>Sendai, Japan        | "For invention and development of the class of static induction transistors (SIT) and for advances in optoelectronic devices." |
| 1982 - DOV FROHMAN-BENTCHKOWSKY<br>INTEL Elec.<br>Jerusalem, Israel    | "For contributions to non-volatile semiconductor memories."  |
| 1981 - NICK HOLONYAK, JR.<br>University of Illinois<br>Urbana, IL, USA | "For pioneering work in quantum well lasers and contributions to visible semiconductor lasers and light-emitting diodes."      |
| 1980 - JAMES F. GIBBONS<br>Stanford University<br>Stanford, CA, USA    | "For pioneering contributions to the use of ion implantation in the fabrication of semiconductor devices."                     |
| 1979 - MARTIN P. LEPELTER<br>Bell Laboratories<br>Murray Hill, NJ, USA | "For invention of the beam-lead structure and metallurgy used in silicon integrated circuits."                                 |
| 1978 - JURI MATISOO<br>IBM Corp.<br>Yorktown Heights, NY, USA          | "For pioneering the Josephson computer technology."  |
| 1977 - MORGAN SPARKS<br>Sandia Corp.<br>Albuquerque, NM, USA           | "For contributions to solid-state device technology and the management of research and development."                           |
| 1976 - ROBERT N. HALL<br>General Electric Co.<br>Schenectady, NY USA   | "For outstanding achievement in solid-state physics and chemistry and the invention and development of semiconductor devices." |