
E PLURIBUS UNUM

THE PRESIDENT

welcomes you to

THE WHITE HOUSE

on the occasion of the presentation of

THE NATIONAL
MEDAL OF SCIENCE
AND
THE NATIONAL
MEDAL OF TECHNOLOGY

Friday, July 27, 2007

Congratulations to the 2005 and 2006 Laureates of the National Medal of Science and the National Medal of Technology. These prestigious awards pay tribute to your many achievements.

Strong leadership in the fields of science and technology is critical to our country's continued competitiveness and prosperity. America is proud of those who carry on our Nation's long legacy of discovery, and the National Medals celebrate the extraordinary accomplishments of some of our most talented scientists, engineers, and innovators. By challenging the status quo and boldly asking important questions, you have applied your talent to great purposes and achieved historic results that will endure beyond your years.

I appreciate the National Science and Technology Medals Foundation, the 2005 and 2006 Laureates, and all those who strive to advance America's tradition of progress. Your efforts embody the spirit and vision that make our country great and help build a better tomorrow for all citizens.

Laura and I send our best wishes for continued success.

President George W. Bush

PROGRAM

Remarks by

The President

Presentation of Medals

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Reception to follow

THE NATIONAL MEDAL OF SCIENCE

The National Medal of Science is the Nation's highest scientific honor. Established by Congress in 1959, and administered by the National Science Foundation, it is bestowed annually by the President of the United States on a select group of individuals deserving of special recognition for their outstanding contributions in one of the following fields: biology, chemistry, geology, physics, mathematics, sociology, behavioral and economic sciences, and engineering. President John F. Kennedy awarded the first Medal of Science in 1962 to the late Theodore Von Karman, professor emeritus, California Institute of Technology. Four hundred and forty-one individuals have been awarded the Medal of Science including such distinguished scientists and engineers as Eugene M. Shoemaker, co-discoverer of the Shoemaker-Levy comet; economist Milton Friedman; Edward Witten, for string theory; and C. Kumar N. Patel, inventor of the carbon dioxide laser, which helped revolutionize the medical surgery field. Each year, an independent twelve-member presidentially-appointed committee of scientists and engineers reviews nominations and makes its recommendations to the President, who selects the laureates.

THE NATIONAL MEDAL OF TECHNOLOGY

The National Medal of Technology is the Nation's highest award for technological achievement. It recognizes American innovators whose vision, intellect, creativity and sheer determination have made profound and lasting contributions to our economy and quality of life. Established by Congress and administered by the Technology Administration within the U.S. Department of Commerce, one hundred and seventy-five Medals have been awarded to individuals, team members and companies. The first Medal of Technology was presented in 1985 by President Ronald Reagan. Recipients have included such technological pioneers as Ray M. Dolby of Dolby Laboratories; Steve Wozniak, formerly of Apple Computer; Stephanie Kwolek, formerly of Dupont; and outstanding American companies that have led the world in technological innovation. An independent committee representing both private and public sectors evaluates the merits of all candidates nominated through an open, competitive solicitation process. Committee recommendations are forwarded to the Secretary of Commerce, who makes recommendations to the President for final decision.

2005 NATIONAL MEDAL OF SCIENCE LAUREATES

Jan D. Achenbach
Northwestern University
For his seminal contributions to engineering research and education in the area of wave propagation in solids and for pioneering the field of quantitative non-destructive evaluation.

Ralph A. Alpher
The Dudley Observatory
For his unprecedented work in the areas of nucleosynthesis, for the prediction that universe expansion leaves behind background radiation, and for providing the model for the Big Bang theory.

Gordon H. Bower
Stanford University
For his unparalleled contributions to cognitive and mathematical psychology, for his lucid analyses of remembering and reasoning, and for his important service to psychology and to American science.

Bradley Efron
Stanford University
For his contributions to theoretical and applied statistics, especially the bootstrap sampling technique; for his extraordinary geometric insight into nonlinear statistical problems; and for applications in medicine, physics, and astronomy.

Anthony S. Fauci
The National Institute of Allergy and Infectious Diseases
For pioneering the understanding of the mechanisms whereby the human immune system is regulated, and for his work on dissecting the mechanisms of pathogenesis of human immunodeficiency virus (HIV), that has served as the underpinning for the current strategies for the treatment of HIV disease.

Tobin J. Marks
Northwestern University
For his pioneering research in the areas of homogeneous and heterogeneous catalysis, organo-f-element chemistry, new electronic and photonic materials, and diverse areas of coordination and solid state chemistry.

Lonnie G. Thompson
Ohio State University
For his pioneering research in paleoclimatology analyzing isotopic and chemical fingerprints found in tropical ice cores from the world's highest mountain glaciers and for his courage in collecting these disappearing climate archives that has transformed our understanding of the natural and anthropogenic factors influencing climate variability on our planet, past and present.

Torsten N. Wiesel
The Rockefeller University
For providing key insights into the operation of the visual system and for the discovery of the manner in which neural connections in the brain are made during development and how they are maintained.

2006 NATIONAL MEDAL OF SCIENCE LAUREATES

Hyman Bass
University of Michigan
For his fundamental contributions to pure mathematics, especially in the creation of algebraic K-theory, his profound influence on mathematics education, and his service to the mathematics research and education communities.

Marvin H. Caruthers
University of Colorado
For his work in developing robust methods for the chemical synthesis of DNA, which has enabled genetic engineering of new biopharmaceuticals, forensic "DNA fingerprinting," and the human genome project.

Rita R. Colwell
University of Maryland
For her in-depth research that has contributed to a greater understanding of the ecology, physiology, and evolution of marine microbes, most notably Vibrio cholerae, the causative agent of pandemic cholera, and which has elucidated critical links between environmental and human health.

Peter B. Dervan
California Institute of Technology
For his fundamental research contributions at the interface of organic chemistry and biology, and for his influence in education and industrial innovation.

Nina V. Fedoroff
Pennsylvania State University
For her pioneering work on plant molecular biology, and for her being the first to clone and characterize maize transposons. She has contributed to education and public policy pertaining to recombinant DNA and genetic modification of plants.

Daniel Kleppner
Massachusetts Institute of Technology
For his pioneering scientific studies of the interaction of atoms and light including Rydberg atoms, cavity quantum electrodynamics, quantum chaos; for developing techniques that opened the way to Bose Einstein Condensation in a gas; and for lucid explanations of physics to non-specialists and exemplary service to the scientific community.

Robert S. Langer
Massachusetts Institute of Technology
For his revolutionary discoveries in the areas of polymeric controlled release systems and tissue engineering and synthesis of new materials that have led to new medical treatments that have profoundly affected the well-being of mankind.

Lubert Stryer
Stanford University
For his pioneering application of fluorescence spectroscopy, and particularly fluorescence resonance energy transfer, to the analysis of biological macromolecules; he elucidated the biochemical basis of signal amplification in vision and pioneered the development of high density micro-arrays for genetic analysis ("gene chips"). His influential biochemistry textbook has influenced and inspired millions of students.

2005 NATIONAL MEDALS OF TECHNOLOGY LAUREATES

Alfred Y. Cho
Alcatel-Lucent Bell Laboratories

For his contributions to the invention of the molecular beam epitaxy (MBE) technology and the development of the MBE technology into an advanced electronic and photonic devices production tool, with applications to cellular phones, CD players, and high-speed communications.

Genzyme Corporation
Cambridge, MA

For pioneering dramatic improvements in the health of thousands of patients with rare diseases and harnessing the promise of biotechnology to develop innovative new therapies.

Semiconductor Research Corporation
Durham, NC

For building the world's largest and most successful university research force to support the rapid growth and advance of the semiconductor industry; for proving the concept of collaborative research as the first high-tech research consortium; and for creating the concept and methodology that evolved into the International Technology Roadmap for Semiconductors.

Dean L. Sicking
University of Nebraska-Lincoln

For his innovative design and development of roadside and race track safety technologies that safely dissipate the energy of high-speed crashes, helping prevent fatalities and injuries.

Wyeth Pharmaceuticals Team
(Wyeth Headquarters, Madison, NJ)
Ronald Eby, Velupillai Puvanesarajah, Dace Viceps Madore, Maya Koster

For their work in the discovery, development and commercialization of Prevnar, the first-ever vaccine to prevent the deadly and disabling consequences of Streptococcus pneumoniae infections in children

Xerox Corporation
Stamford, CT

For over fifty years of innovation in marking, materials, electronics, communications, and software that created the modern reprographics, digital printing, and print-on-demand industries.

2006 NATIONAL MEDAL OF TECHNOLOGY LAUREATES

Leslie A. Geddes
Purdue University

For his contributions to electrode design and tissue restoration, which have led to the widespread use of a wide variety of clinical devices. His discoveries and inventions have saved and enriched thousands of lives and have formed the cornerstone of much of the modern implantable medical device field.

Paul G. Kaminski
Technovation, Inc.

For his contributions to national security through the development of advanced, unconventional imaging from space, and for developing and fielding advanced systems with greatly enhanced survivability. He has made a profound difference in the national security posture and the global leadership of the United States.

Herwig W. Kogelnik
Alcatel-Lucent Bell Laboratories

For his pioneering contributions and leadership in the development of the technology of lasers, optoelectronics, integrated optics, and lightwave communication systems that have been instrumental in driving the growth of fiber optic transmission systems for our Nation's communications infrastructure.

Charles M. Vest
Massachusetts Institute of Technology

For his visionary leadership in advancing America's technological workforce and capacity for innovation through revitalizing the national partnership among academia, government, and industry.

James E. West
The Johns Hopkins University

For coinventing the electret microphone in 1962. Ninety percent of the two billion microphones produced annually and used in everyday items such as telephones, hearing aids, camcorders, and multimedia computers employ electret technology.

THE PRESIDENT'S COMMITTEE ON THE NATIONAL MEDAL OF SCIENCE

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*Member, ex officio

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