

2008-2009 YEAR BOOK

# The President's Report

*July 1, 2008 - June 30, 2009*

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*“ . . . to encourage, in the broadest and most liberal manner, investigation, research, and discovery, and the application of knowledge to the improvement of mankind . . . ”*

The Carnegie Institution was incorporated with these words in 1902 by its founder, Andrew Carnegie. Since then, the institution has remained true to its mission. At six research departments across the country, the scientific staff and a constantly changing roster of students, postdoctoral fellows, and visiting investigators tackle fundamental questions on the frontiers of biology, earth sciences, and astronomy.

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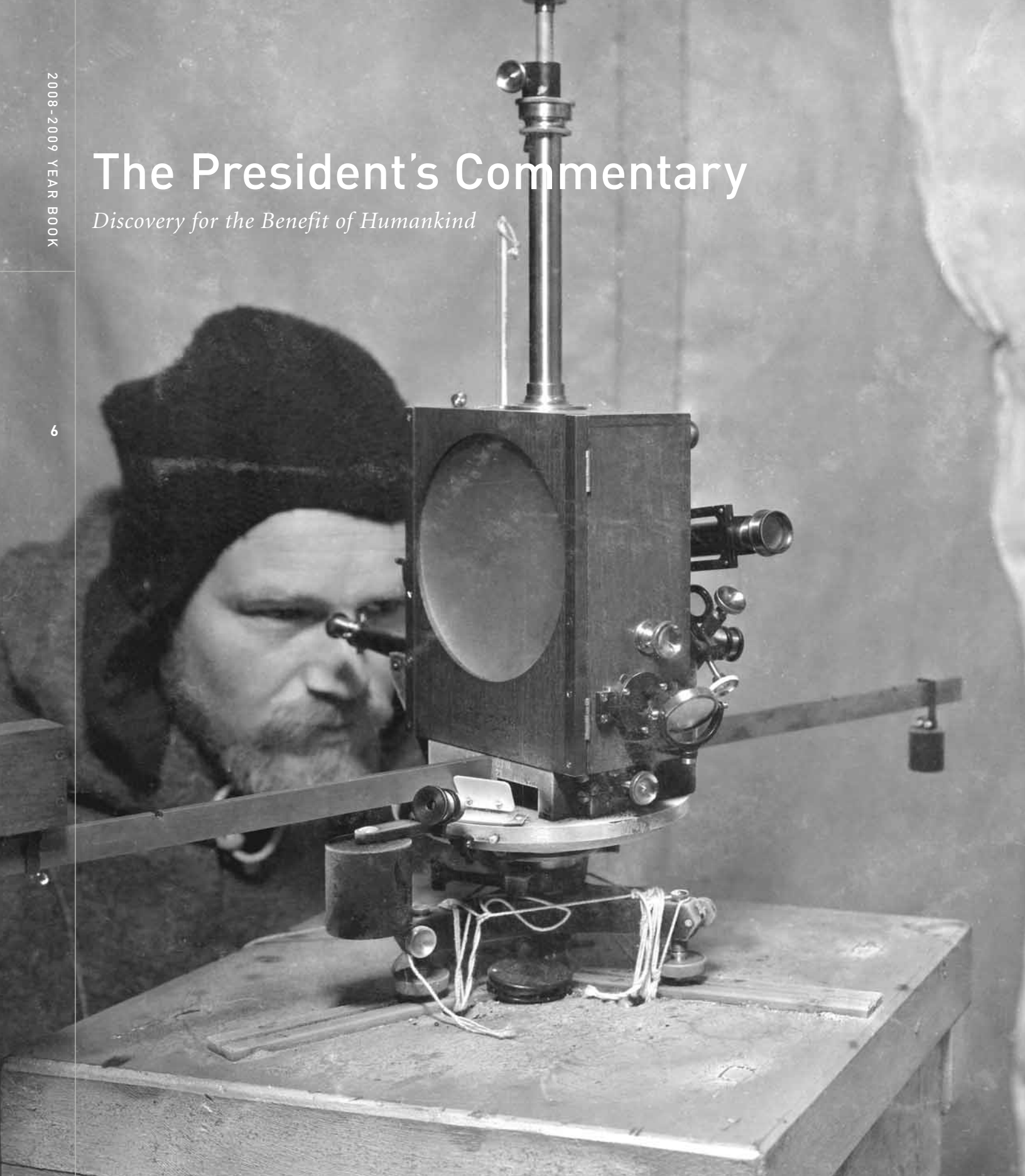


# Contents

The President's Commentary	6
Friends, Honors & Transitions	14
Research Highlights	25
Financial Profile	52
Personnel	58
Bibliography	76

# The President's Commentary

*Discovery for the Benefit of Humankind*





Carnegie president  
Richard A. Meserve  
*Image courtesy Jim Johnson*

Andrew Carnegie created the Carnegie Institution with the intention that it “shall in the broadest and most liberal manner encourage investigation, research, and discovery.” The institution was to pursue this purpose by endeavoring “to discover the exceptional man in every department of study. . . and enable him to make the work for which he seems specially designed his life work.” Carnegie’s aim was to “show the application of knowledge to the improvement of mankind.”

Andrew Carnegie was remarkably prescient in his awareness of the important role of research as a catalyst for improving humankind’s lot. This awareness did not arise as a matter of government policy until after World War II and the publication of *Science: The Endless Frontier* by Carnegie president Vannevar Bush. We have remained true to Carnegie’s direction, although of course we now fully recognize that both women and men have important contributions to make!

Basic science, by definition, is not undertaken with the expectation that commercial products or processes will result. (These occasionally do arise and, if they do, we seek to obtain any gain through the licensing of patents.) Our output is principally scientific discoveries that expand the boundaries of human knowledge. The remarkable contribution of Carnegie scientists to the storehouse of knowledge is reflected by the wide array of scientific papers, listed elsewhere in this volume, that were published in prestigious journals over the past year.

This focus on advancing knowledge for knowledge’s sake does not mean that basic research is irrelevant to human problems. The expansion of scientific understanding ultimately is reflected in products and processes that revolutionize our lives. Scientific advances have provided the foundations for remarkable advances in health care, computation, communication, food production, defense, energy production and use, transportation, and more. Moreover, economists have estimated that scientific research is the foundation for a significant portion of our economy’s productivity gains.

If the past is our guide, we can have faith that research of the type conducted by Carnegie scientists will yield bountiful advances in the human condition in the years ahead. But we cannot predict what particular research project will open the door to spectacular new advances. Just as the scientists exploring quantum theory in the 1930s could not anticipate the computer and communications revolutions that their advances would enable, we cannot always know what particular basic research undertaken today will ultimately have profound impacts on humankind. Experience shows, however, that the portfolio of basic research will open doors for advances that we cannot now even imagine.

Nonetheless, while we cannot predict which projects will ultimately have widespread impact, we can often have a reasonable expectation of at least the possible immediate consequences of our research. One of the most pressing problems that the world confronts is related to the threat of climate change, which in turn is principally the product of our current dependence on fossil fuels for generating energy. Given the importance of this problem, I shall seek to array the range of research now underway at Carnegie that can impact the energy/climate problem.

We created the Department of Global Ecology in 2002 to provide an opportunity for cross-disciplinary work related to global environmental problems. Not surprisingly,



◀ Chris Field (right), director of the Department of Global Ecology, is co-chair of Working Group II of the Intergovernmental Panel on Climate Change (IPCC). He testified at a hearing on Capitol Hill with Rajendra Kumar Pachauri, chair of the IPCC, in February 2009.

*Image courtesy Senate Committee on Environment and Public Works*



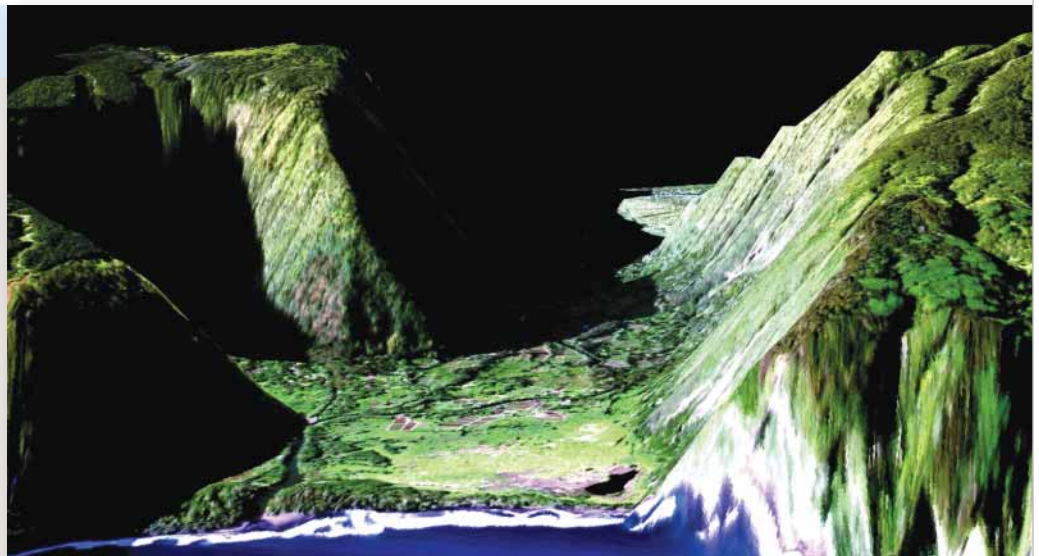
the department is pursuing important work related to climate change. Chris Field, the director, was one of only two Americans who were invited to Oslo to receive the 2007 Nobel Peace Prize awarded to the Intergovernmental Panel on Climate Change (IPCC). He is now working on the next IPCC assessment as the co-chair of Working Group II, which will examine impacts, adaptation and, vulnerability. Ken Caldeira is pursuing fundamental research on the acidification of the oceans resulting from increased concentrations of carbon dioxide in the atmosphere and on geoengineering, studying the various schemes to counteract the impact of increased greenhouse gases. Joe Berry and Greg Asner are monitoring of the regional effects of increases in atmospheric carbon dioxide levels. The Carnegie Airborne Observatory, which is being developed under Asner's supervision, promises to provide an important foundation for international agreements through its capability to provide a detailed inventory of the carbon in tropical forests.

We will need a variety of new energy sources to displace conventionally burned fossil fuels. Biofuels should play an important role and the scientists at our Department of Plant Biology are pursuing the basic science that will enable the wider application of this energy source. The scientific output of nearly all the research in the department could ultimately have important ramifications for energy and food production. For example, Arthur Grossman's work on algae could provide the foundations for a whole

Global Ecology staff member, Joe Berry, conducts carbon monitoring in the field.

The Carnegie Airborne Observatory (CAO) uses advanced spectroscopic imaging and waveform laser remote sensing technologies to understand how changes in land use, climate, and natural disturbances affect the structure, composition and, functioning of ecosystems. This is a CAO image of Limahuli Hawaii.

Image courtesy CAO



*Carnegie Institution for Science*

new feedstock for producing important energy molecules and, indeed, his work on cell metabolism could open up the possibility of algal-based hydrogen production. David Ehrhardt's work on cellulose synthesis will bear on how plant development might be manipulated to facilitate the production of fuel from this abundant source of renewable hydrocarbons. And Zhi-Yong Wang's work on the hormones that control plant growth could provide the foundation for enhanced biomass production for food and energy.

The Geophysical Laboratory also has a range of important activities relating to energy. With a major grant from the Alfred P. Sloan Foundation, Carnegie scientists are leading an international consortium to develop a greater understanding of carbon in the Earth, including the influences of the carbon cycle on energy, environment, and climate. Among other activities, the research will define the reservoirs of carbon in the deep Earth and fluxes between them, as well as the nature and extent of microbial life at depth and the formation, stability and properties of hydrocarbons and carbon-rich fluids. In addition, with the benefit of a major grant from the Department of Energy (DOE), Carnegie established a center for Energy Frontier Research in Extreme Environments (EFree). Carnegie was one of only two non-profits to receive support under DOE's program to establish a series of Energy Frontier Research Centers. The center will use high temperatures and pressures to develop new classes



Plant Biology's Arthur Grossman (left) and Florence Mus (bottom) study properties of the single-celled alga called *Chlamydomonas reinhardtii* including how it may be used to produce significant amounts of hydrogen. The algae shown here are dyed. Purple reveals DNA and green indicates flagella.

*Images courtesy Arthur Grossman and Florence Mus*

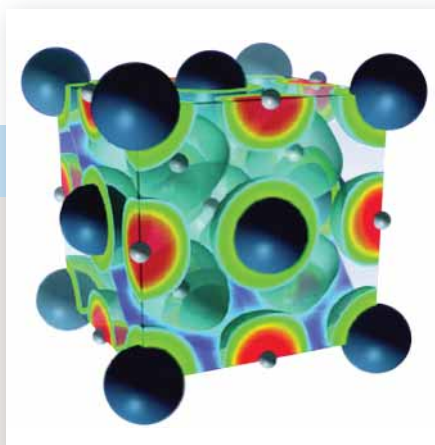
of materials of importance to energy—superconductors, superhard materials, new ferroelectrics and magnetic systems, and materials that resist chemical attack under extreme conditions. In addition, the center will seek to understand the properties of known materials in the extreme environments encountered in energy applications. The Carnegie center will build on the long and distinguished legacy of work by a wide variety of Carnegie scientists on these problems.

These projects skim the surface of the important work underway that ultimately will help define the pathway to a sustainable environment. And, of course, our work relating to energy and climate issues reflects just a partial inventory of the cutting-edge research that is underway across the institution. Our work in astronomy and planetary science, in molecular biology, and geophysics will also widen our understanding in profound ways. The supporters of the institution can be confident that we are zealously pursuing “leadership in the domain of discovery and the utilization of new forces for the benefit of man,” just as our founder intended.

My commentary in these pages last year focused on the challenge that confronts the institution in responding to the severe recession that has gripped our country. In particular, I discussed the budgetary challenge that we faced as a result of threats to our major sources of revenue—the endowment, federal grants and contracts, and

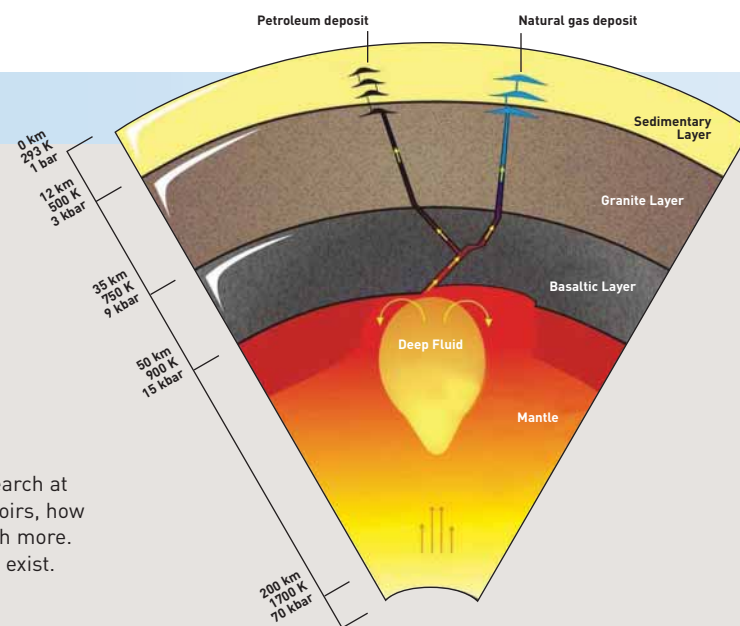
The EFree grant at the Geophysical Laboratory will support research into materials important to energy, such as this dense superconducting hydride.

*Image courtesy Physical Review Letters*



The Alfred P. Sloan Foundation grant will support research at the Geophysical Laboratory into Earth's carbon reservoirs, how it flows from the interior to the atmosphere, and much more. This cutaway shows where very deep reservoirs might exist.

*Image courtesy A. Kolesnikov and V. Kutchero*

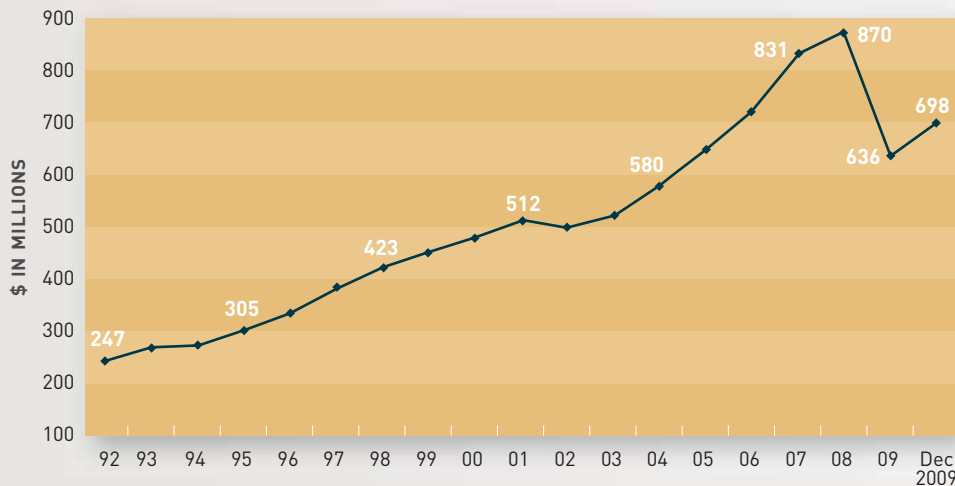


support from foundations and individuals. I indicated that, although we faced a difficult time, I was confident that Carnegie would weather the storm.

Fortunately, my optimism has proven to be justified. Although our endowment declined from approximately \$870 million at June 30, 2008, to approximately \$609 million on March 2, 2009, the valuation has recovered to approximately \$698 million by December 31, 2009. We remain confident that our disciplined allocation to diverse investments coupled with a strategy of prudent endowment spending will allow the preservation of an endowment that will adequately support both current and future activities.

In my submission last year, I anticipated that we should prepare for the likelihood that federal grants and contracts would decline as a result of the need to constrain budget outlays. As it happened, the last federal budget was a strong one for science and the support for R&D increased further as a result of the stimulus legislation. Carnegie's inventory of federal grants and contracts grew from \$29.1 million on June 30, 2008, to \$35.5 million on December 31, 2009. Because these grants typically extend for several years, this inventory will provide a buffer over the next few years. Nonetheless, we anticipate constraints on federal support for science in future years as a result of the pressures to limit discretionary spending within the federal budget. We are thus planning for the likelihood that lean years for federal support may be ahead of us.

### Carnegie Endowment 1992-2009



Although the Carnegie endowment experienced a decline as a result of the recession, its valuation has begun to increase to about \$698 million as of December 2009.

I also noted last year that in the past foundations had been very generous to Carnegie, but that such support might be difficult to sustain given the significant decline in the valuations of those institution's endowments in 2008. We are fortunate that we have continued to receive significant foundation support. Foundation and private grants grew from \$24.1 million on June 30, 2008, to approximately \$34.9 million on December 31, 2009. Of course, our success in competing for both federal and foundation support is a testament to the scientific skill of our staff and the compelling nature of the science that we pursue.

Our efforts to improve the efficiency of our operations have also been successful. We have not had to lay off employees, but we have been prudent in hiring decisions. We have reduced certain administrative costs for insurance and information technology at the same time that we have improved our business operations through implementation of a new computerized accounting system, as well as other actions. Our revenue from rentals of our headquarters at P Street has increased by 50% as a result of a focused effort, and patent revenues were up in 2008 and 2009, compared to 2006 levels, by 100% and 79%, respectively. Charity Navigator, America's largest evaluator of non-profits and charities for fiscal management, has included Carnegie on its top-ten list of enterprises with consecutive highest ratings, reflecting the efficiency of our operations.

In sum, we remain financially strong in a very difficult period. Moody's Investor Service in a recent review affirmed its highest rating for Carnegie in recognition of our financial strength. Only 37 other higher-educational institutions and non-profits across the country are in this category.

Despite these signs of continuing strength, we are obliged to husband our funds prudently. In this connection, we continue to benefit from the expertise and engagement of our board of trustees. I have optimism that we will emerge from this difficult economic period with a noteworthy capacity to enrich the inventory of scientific knowledge on into the future, just as we have in the past.



*Richard A. Meserve*



**Moody's Investors Service**



Carnegie has received the highest rating for sound fiscal management—four stars—from Charity Navigator, America's largest charity rating organization for eight years running. Only four organizations out of more than 5,000 have had the same rating over the same time. Moody's affirmed its highest rating of Aaa/VMIG1 on Carnegie series 1993, 2002, and 2006 bonds during the last year.

# Friends, Honors & Transitions



# Carnegie Friends



## Annual Giving

### The Barbara McClintock Society

An icon of Carnegie science, Barbara McClintock was a Carnegie plant biologist from 1943 until her retirement. She was a giant in the field of maize genetics and received the 1983 Nobel Prize in Physiology/Medicine for her work on patterns of genetic inheritance. She was the first woman to win an unshared Nobel Prize in this category. To sustain researchers like McClintock, annual contributions to the Carnegie Institution are essential. The McClintock Society thus recognizes generous individuals who contribute \$10,000 or more in a fiscal year, making it possible to pursue the highly original research for which Carnegie is known.

#### \$1,000,000 or more

Deborah Rose, Ph.D.

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Gary P. and Suzann A. Brinson

Michael A. Duffy

Martin Gellert

Sibyl R. Golden

## Michael Erwin Gellert

Since he joined the board of trustees in 1995, Michael Gellert has donated substantial time, guidance, and gifts to help make the last decade and a half one of the institution's most productive periods. Born in Czechoslovakia, Gellert came to the United States in 1941. He received his B.A. from Harvard University and his M.B.A from the Wharton School at the University of Pennsylvania. Following two years in the U.S. Army, he started his financial career in 1958 and in 1967 created Windcrest Partners, a venture capital and public equity investment firm.

One of Carnegie's legendary trustees, the late Bill Golden, introduced Gellert to Carnegie. From the beginning Gellert has shown particular interest in the research conducted by Carnegie scientists and has applied his extensive business expertise to advance Carnegie's mission of supporting exceptional individuals.

Carnegie has profited from the financial insights Gellert has offered as a member of the Finance and Development committees for many years. Then, in 2003, he became chairman of the board. President Meserve has marveled at Gellert's thoughtful attention to Carnegie and his constant availability to help chart the institution's course.

A member of the Edwin Hubble Society, Gellert is extraordinarily generous and typically the first to contribute to Carnegie campaigns. He then actively encourages others to do so. Over the years, he has also hosted numerous events in New York City, broadening the circle of Carnegie friends. Only three others have surpassed him in giving: Andrew Carnegie; the late William Hewlett, former Carnegie board chairman; and the late Caryl Haskins, former Carnegie president.

Carnegie is privileged to have had Michael Gellert serve on its board for the past 14 years. The institution owes much of its current vitality to him.



★ *Chairman of the Board  
Michael Erwin Gellert*

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Liang-Chen Chen	Giorgio Ascoli	Gundolf H. Kohlmaier	Gary G. Mrenak
Asit Choudhuri	David J. Goldston	David C. Koo	Thomas A. Mueller
Ida Chow	Thomas and Josephine	William E. Kopka	Manning Muntzing
Michael P. Cohen	Greeley	Olavi Kouvo	Charles G. Myers
John R. Coleman	Irene M. Grill	Albert R. Kranz	Ralph H. Nafziger
Cathy and Lauren Colloff	Ronald R. Gustafson	Audrey S. Krause	Jatinder N. Nanda
John D. Cooper	Joseph H. Guttentag	Joseph Kubicky	Norman and Georgine
José M. Correia Neves	Dorothy and William Hagar	Faith and Arthur LaVelle	Neureiter

## Carnegie Institution for Science

Sonia and Phillip Newmark	Benjamin Richter	Christine D. Smith	Richard Walker and
Richard L. Nielsen	Lindsey C. Robertson	John T. Smith	Mary Horan
Peter J. Nind	Anne G. Rosenwald	Erich W. Steiner	Wayne H. Warren
Adrienne Noe	Christopher Rubel	Faith and Kurt Stern	Johannes Weertman
Noboru Oba	Doug and Karen Rumble	Alan M. Stueber	Lorrie D. Westerlund
Michael O'Connor	Nadia M. Saad	Cathy Sulzberger	Edward White
Michael Ollinger	Akira Sasaki	Ichiro Sunagawa	William M. White
Gilbert Omenn and	James B. Saukel	Nugroho H. Suwito	Ian S. Williams
Martha Darling	Anne K. Sawyer	Thomas H. Symons	James E. Williams
Kathy Orlinsky	Maarten Schmidt	Kathleen Taimi	Evelyn M. Witkin
Fred Palazzi	Joyce R. Schwartz	Gary R. Tanigawa	Susan T. Wolfson
Deborah and R. B. Parry	François and Linda	Lawrence A. Taylor	Frank K. Wyatt
Joseph G. Perpich	Schweizer	Thomas M. Tekach	Nicholas Wyatt
Arnold Phifer	Malcolm Scully	Michael W. Thacher	Christy Wyskiel
Carlos Picone	Michael Seibert	Norbert Thonnard	Robert Yamartino
Daniel W. Pugh	Constantine E. Sekeris	Tom Thornbury	Charles Yanofsky
B. P. Radharkrishna	Patricia Shapiro	Peter A. Tinsley	Carol and Irving Yoskowitz
Shirley Raps	Nobumichi Shimizu	Priestley Toulmin	Richard S. Young
Martin Ratliff	Kiyoji Shiono	Charles H. Townes	Violet K. Young
Donald G. Rea	Randolph Sim	Jonathan Tuerk	Timothy A. Zimmerlin
Patrick Reavey	Mary E. Simon	Rosalie and Larry	Wanna Zinsmaster
Minocher Reporter	Jeffrey Singer	Vanderhoef	
Philippe Reymond	Brian G. Smith	David Velinsky	

## Foundations and Corporations

**\$1,000,000 or more**

Gordon and Betty Moore Foundation

**\$100,000 to \$999,999**

Anonymous

Fannie Mae Foundation

The Gayden Family Foundation

Math for America, Inc.

Andrew W. Mellon Foundation

Ambrose Monell Foundation

The Rutter Foundation

Alfred P. Sloan Foundation

**\$10,000 to \$99,999**

Anonymous

The Brinson Foundation

The Morris and Gwendolyn Cafritz  
Foundation

The Margaret A. Cargill Foundation

Carnegie Institution of Canada/  
Institution Carnegie du Canada

Durland Co., Inc.

Fondation de France

Herman Frasch Foundation for  
Chemical Research

Golden Family Foundation

Richard W. Higgins Foundation

The Marion I. and Henry J. Knott  
Foundation, Inc.

The G. Harold and Leila Y. Mathers

Charitable Foundation

The McMurtry Family Foundation

The Ralph M. Parsons Foundation

The Rose Hills Foundation

M &amp; C Stone Charitable Trust

United Jewish Endowment Fund

The Sidney J. Weinberg, Jr., Foundation

**\$1,000 to \$9,999**

Baltimore Precision Instruments, LLC

Cavalieri-Look Fund

Citi Global Impact Funding Trust, Inc.

Ernst Charities

The Holaday Foundation

Lee &amp; Louis Kuhn Foundation

## Deborah Rose

What is a chronic disease epidemiologist doing on the board of the Carnegie Institution for Science?

As a health statistician with the Centers for Disease Control, Secretary of the Board Deborah Rose collects and analyzes data about the whole population—good methodological training for seeing the big picture in other scientific arenas.

Deborah's affiliation with Carnegie began when President Emerita Maxine Singer sought her views on Carnegie's role in the community. Rose looked at everything from the neighborhood surrounding the administration building to its aging information technology. Her analysis was an important element in the decision to restore the Root Auditorium, now used for many public events, and undertake a major upgrade to the administration's computing capability. Elected to the board of trustees in 2001, she became secretary in 2003 and continues to be fascinated by Carnegie research.

Rose encouraged the use of state-of-the-art technology in the Rose Auditorium of the Maxine F. Singer Building, which houses the Department of Embryology in Baltimore. She contributed to the renovation of the classrooms in the administration building that house the Carnegie Academy for Science Education and First Light, founded in 1989 to bring an understanding and love of science to Washington, D.C., schoolchildren. Rose supports Math for America (MfA DC), which partners with Carnegie and American University to train promising mathematicians to teach secondary school students.

Recently, Rose became fascinated by the interplay between fundamental materials science research and its practical application as exemplified by the chemical vapor deposition (CVD) process developed at the Geophysical Laboratory to produce high-quality diamonds. She funded the development and acquisition of a new, high-capacity fabrication chamber that facilitates both.

Rose is a member of the Edwin Hubble Society.



★ Secretary of the Board  
Deborah Rose

Laubach Family Fund  
Linden Trust for Conservation  
The New York Community Trust  
Northrop Grumman Foundation  
Rathmann Family Foundation  
Roxiticus Fund  
The Weathertop Foundation  
Zimmer Gunsul Frasca Architects LLP

### Under \$1,000

Allied Electronic Services, Inc.  
Lloyd I. Biscomb Fund of Donor Trust  
Chevron Humankind Program  
The Doak Family Revocable Trust  
Arthur and Linda Gelb Charitable  
Foundation

Greater Houston Community  
Foundation  
Hartco Environmental, LLC  
Hewitt Family Trust  
Hicks Family Charitable Foundation  
KPMG  
The Lehmann Trust  
Robert W. and Gladys S. Meserve  
Charitable Trust  
Rundle-Thacher Trust  
The SDLM Trust  
The Seattle Foundation  
R. J. Yamartino Gift Fund  
Yanofsky Family Revocable Trust

### Government

#### Over \$1,000,000

National Aeronautics and Space  
Administration  
National Science Foundation  
U.S. Department of Energy  
U.S. Public Health Services-National  
Institutes of Health

#### \$100,000 to \$1,000,000

U.S. Department of Agriculture  
U.S. Office of Naval Research

#### \$10,000 to \$99,999

USDA Forest Service

## Research Grant Highlights

### Airborne Taxonomic Mapping System

**\$5.2 million from Gordon and Betty Moore Foundation to the Department of Global Ecology**

To develop a next-generation spectrometer for an advanced instrument to be used in remote sensing of tropical forests

### Astrobiology Institute

**\$7 million from NASA to the Geophysical Laboratory, Department of Terrestrial Magnetism, and Carnegie Academy for Science Education**

To study the chemical and physical evolution of the origin of life in the universe, in partnership with NASA and other institutions

### Brain Asymmetry

**\$1.6 million from National Institutes of Health to the Department of Embryology**

To study how differences are established between the left and right sides of the developing brain

### Carnegie Landsat Analysis System

**\$1.6 million from Gordon and Betty Moore Foundation to the Department of Global Ecology**

To expand satellite-based forest monitoring in the Andes Amazon region on a country-by-country basis

### Deep Carbon Observatory

**\$4 million from Alfred P. Sloan Foundation to the Geophysical Laboratory**

To launch a decade-long international research effort to understand the dynamics of Earth's deep carbon

### Energy Frontier Research in Extreme Environments

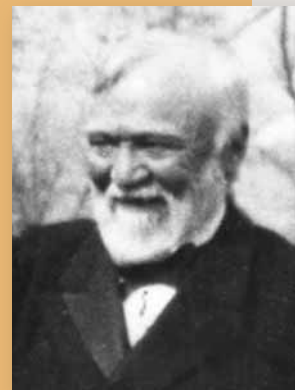
**\$15 million from U.S. Department of Energy to the Geophysical Laboratory**

To study materials under extreme conditions with the goal of making scientific breakthroughs that are essential to large-scale replacement of fossil fuels with alternative and renewable energy

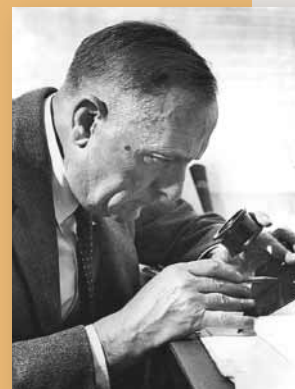
### Math for America DC

**\$1.5 million from National Science Foundation**

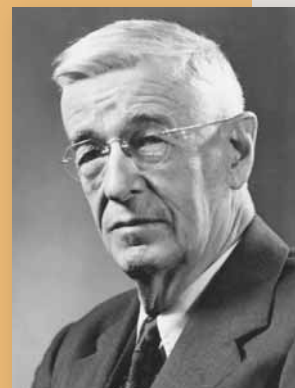
To improve math education in Washington, DC, in partnership with American University, by selecting and training fellows with math expertise to become skilled teachers



★ Andrew Carnegie



★ Edwin Hubble



★ Vannevar Bush

## Lifetime Giving Societies

### The Carnegie Founders Society

Andrew Carnegie, the founder of the Carnegie Institution, established it with a gift of \$10 million. Although he ultimately gave a total of \$22 million to the institution, his initial \$10 million gift represents a special level of giving. In acknowledgment of the significance of this initial contribution, individuals who support Carnegie's scientific mission with lifetime contributions of \$10 million or more are recognized as members of the Carnegie Founders Society.

Caryl P. Haskins\*

William R. Hewlett\*

### The Edwin Hubble Society

The most famous astronomer of the 20th century, Edwin Hubble, joined the Carnegie Institution in 1919. Hubble's observations shattered our old concept of the universe. He proved that the universe is made of collections of galaxies and is not just limited to our own Milky Way—and that it is expanding. This work redefined the science of cosmology. Science typically requires years of work before major discoveries like these can be made. The Edwin Hubble Society honors those whose lifetime support has enabled the institution to continue fostering such long-term, paradigm-changing research by recognizing those who have contributed between \$1,000,000 and \$9,999,999.

D. Euan and Angelica Baird

Burton and Deedee McMurtry

Michael and Mary Gellert

Jaylee M. Mead

Robert G. and Alexandra

Cary Queen

C. Goelet

Deborah Rose, Ph.D.

William R. Hearst III

William J. Rutter

Richard E. Heckert

Thomas and Mary Urban

Kazuo and Asako Inamori

Sidney J. Weinberg, Jr.

### The Vannevar Bush Society

Vannevar Bush, the renowned leader of American scientific research of his time, served as Carnegie's president from 1939 to 1955. Bush believed in the power of private organizations and wrote in 1950, "It was Andrew Carnegie's conviction that an institution which sought out the unusual scientist, and rendered it possible for him to create to the utmost, would be worth while [sic] . . ." He further said that "the scientists of the institution . . . seek to extend the horizons of man's knowledge of his environment

and of himself, in the conviction that it is good for man to know." The Vannevar Bush Society recognizes individuals who have made lifetime contributions of between \$100,000 and \$999,999.

Anonymous (3)

Antonia Ax:son Johnson and

Bruce and Betty Alberts

Goran Ennerfelt

Daniel Belin and Kate Ganz

Gerald Laubach

Didier and Brigitte Berthelemot

Lawrence H. Linden

Gary P. and Suzann A. Brinson

John D. Macomber

Donald and Linda Brown

Steven L. McKnight

A. James Clark

Richard A. and Martha

Tom and Anne Cori

R. Meserve

Jean and Leslie Douglas

Al and Honey Nashman

Bruce Ferguson and

Evelyn Stefansson Nef

Heather Sandiford

Vera C. Rubin

Stephen and Janelle Fodor

Allan R. Sandage

William and Cynthia Gayden

Christopher and Margaret Stone

Robert and Margaret Hazen

William and Nancy Turner

## Second Century Society

The Carnegie Institution is now in its second century of supporting scientific research and discovery. The Second Century Society recognizes individuals who have remembered, or intend to remember, the Carnegie Institution in their estate plans and those who have supported the institution through other forms of planned giving.

Bradley F. Bennett

Paul and Carolyn Kokulis

Richard Buynitzky

Gilbert and Karen Levin

Eleanora K. Dalton

Evelyn Stefansson Nef

Nina V. Fedoroff

Allan R. Sandage

Marilyn Fogel and Chris Swarth

Leonard Searle

Kirsten H. Gildersleeve

Maxine and Daniel Singer

Robert and Margaret Hazen

John R. Thomas, Ph.D.

Hatim A. Tyabji

\*Deceased

*Members were qualified with gift records we believe to be accurate.*

*If there are any questions, please call Mira Thompson at 202.939.1122.*

# Honors & Transitions

## Honors

### Administration

In June 2008 Yutaka Iimura, acting on behalf of Emperor Akihito, awarded trustee **John Crawford** the Order of the Rising Sun, Gold Rays with Rosette, for his work ensuring that Japanese nationals receive medical care, in their own language, at the American Hospital of Paris and for strengthening relations between Japan and other nations.

Trustee **Sandra Faber** received the 2009 Bower Award and Prize for Achievement in Science from the Franklin Institute.

Trustee **Stephen Fodor** was elected a member of the National Academy of Engineering in February 2009 for his pioneering genetics work.

Trustee **Mary-Claire King** received an honorary degree from Princeton at its June 2008 commencement.

Carnegie president **Richard Meserve** received the 2008 Philip Hauge Abelson Prize from the American Association for the Advancement of Science (AAAS) for “advancing and promoting the use of science in the service of the public interest and for his exceptional contributions to the scientific community, to policy makers, and to the general public . . .” The award is named in honor of former Carnegie president Philip Abelson.

Science writer **Alan Cutler** won the 2008 James H. Shea Award from the National Association of Geoscience Teachers for his book *The Seashell on the Mountaintop*.

### Embryology

The Society for Developmental Biology awarded former department director **Don Brown** its 2009 Lifetime Achievement Award.

Staff member **Douglas Koshland** was elected a Fellow of the American Academy of Microbiology and a Fellow of the AAAS.

Facilities manager **Tom McDonough** received Carnegie’s Service to Science Award in May 2009.

### Geophysical Laboratory

The International Association for the Advancement of High Pressure Science and Technology awarded department director **Russell Hemley** its 2009 Bridgman Award.

Staff member **Bjørn Mysen** was named a Geochemical Fellow by the Geochemical Society and the European Association for Geochemistry in 2008.

**Robert Hazen** received the 2009 Distinguished Public Service Medal from the Mineralogical Society of America.

### Global Ecology

Director **Christopher Field** was elected cochair of Working Group 2 of the United Nations and World Meteorological Organization’s Intergovernmental Panel on Climate Change, the world’s leading body for the assessment of climate change. He was also elected a Fellow of the AAAS.

Staff researcher **Joe Berry** was elected a Fellow of the American Geophysical Union in 2009.



★ Sandra Faber



★ Stephen Fodor



★ Mary-Claire King



★ Richard Meserve



★ Alan Cutler



★ Don Brown



★ Douglas Koshland



★ Tim McDonough



★ Russell Hemley



★ Bjørn Mysen



★ Robert Hazen



★ Christopher Field



★ Joe Berry

## Carnegie Institution for Science



★ Allan Sandage



★ Wendy Freedman



★ George Preston



★ Arthur Grossman



★ Richard Carlson



★ Michael Acierno



★ Rush Holt



★ Samuel Bodman



★ Wolf Frommer



★ Juna Kollmeier



★ Anat Shahar



★ Bianca Abrams

## Observatories

Staff astronomer emeritus **Allan Sandage** was inducted into the Royal Society as a foreign member in April 2009.

Department director **Wendy Freedman** shared the 2009 Cosmology Prize from the Peter and Patricia Gruber Foundation for her work on defining the Hubble constant.

Former department director **George Preston** received the 2009 Henry Norris Russell Lectureship, the highest distinction awarded by the American Astronomical Society.

## Plant Biology

The National Academy of Sciences awarded staff scientist **Arthur Grossman** the 2009 Gilbert Morgan Smith Medal for his work on algae.

## Terrestrial Magnetism

Staff member **Richard W. Carlson** received the 2008 Norman L. Bowen Award from the American Geophysical Union and was elected a Fellow of the American Academy of Arts and Sciences in 2009.

**Michael Acierno**, IT/IS Manager/Systems Engineer was awarded Carnegie's Service to Science Award in May 2009.

## Transitions

Carnegie welcomed two new trustees in May 2009, Congressman **Rush Holt** of New Jersey and former secretary of energy **Samuel Bodman**.

**Wolf Frommer**, who had been acting director of Plant Biology, was named director in March 2009.

Astronomer **Juna Kollmeier** joined the Observatories as a staff member.

**Anat Shahar** joined the Geophysical Laboratory as a staff scientist.

**Bianca Abrams** joined Carnegie as the director of the Math for America DC program.