

Biden Names 25 Recipients Of National Medals Of Science, Technology

Michael T. Nietzel Senior Contributor 

Michael Nietzel, former college president, writes on higher education

Follow



Jan 5, 2025, 06:00am EST



Ingrid Daubechies, of Duke University, receives her National Medal of Science from Arati Prabhakar, ...

[+] RYAN K. MORRIS AND THE NATIONAL SCIENCE & TECHNOLOGY MEDALS FOUNDATION

President Joe Biden [has announced the latest recipients](#) of the National Medal of Science and the National Medal of Technology and Innovation—the nation’s highest honors for exemplary achievements and leadership in science and technology.

Established in 1959, the National Medal of Science is administered for the White House by the National Science Foundation. The medal recognizes individuals who have made outstanding contributions to science and engineering.

The National Medal of Technology and Innovation was established in 1980 and is administered for the White House by the U.S. Department of Commerce's Patent and Trademark Office. It recognizes individuals and organizations for their lasting contributions to America's competitiveness and quality of life and helped strengthen the nation's technological workforce.

The National Medal of Science was awarded to 14 recipients. Nine individuals were given the National Medal of Technology and Innovation, along with two organizations — Moderna, Inc. and Pfizer Inc.

[Four of the recipients](#) were faculty members at the Massachusetts Institute of Technology. The University of Minnesota, Stanford University, Harvard University and Vanderbilt University had two medal recipients each.

MORE FOR YOU

'A Tidal Wave Of Fear' — Trump Tariffs Fuel Price Crash Fears For Bitcoin, Ethereum, XRP And Crypto



Trump Tariffs Live Updates: Proposed Tariffs On Canada And Mexico Paused For 30 Days



Grammys 2025: A List Of Winners



In a statement from the White House, Biden said, “those who earn these awards embody the promise of America by pushing the boundaries of what is possible. These trailblazers have harnessed the power of science and technology to tackle challenging problems and deliver innovative solutions for Americans and for communities around the world.”

CEO: C-suite news, analysis, and advice for top decision makers right to your inbox.

[Sign Up](#)

By signing up, you agree to receive this newsletter, other updates about Forbes and its affiliates' offerings, our [Terms of Service](#) (including resolving disputes on an individual basis via arbitration), and you acknowledge our [Privacy Statement](#). Forbes is protected by reCAPTCHA, and the Google [Privacy Policy](#) and [Terms of Service](#) apply.

He cited their discoveries in areas such as climate crisis, medical treatments, vaccine developments, changes in communication and improvements in understanding of the universe and our place within it. “Their accomplishments advance American leadership in science, technology, and innovation, and their work inspires the next generation of American leaders,” noted the press release.

The 14 recipients of the National Medal of Science are:

- Richard B. Alley, the Evan Pugh University Professor of Geosciences at Pennsylvania State University. Alley researches the great ice sheets to help predict future changes in climate and sea levels.
- Larry Martin Bartels, University Distinguished Professor of Political Science and Law and the May Werthan Shayne Chair of Public Policy and Social Science at Vanderbilt University. His scholarship focuses on public opinion, public policy, election science, and political economy.
- Bonnie L. Bassler, Squibb Professor in Molecular Biology and chair of the Department of Molecular Biology at Princeton University, for her research on the molecular mechanisms that bacteria use for intercellular communication.
- Angela Marie Belcher, the James Mason Crafts Professor of Biological Engineering and Materials Science and Engineering at MIT and a member of the Koch Institute for Integrative Cancer Research. She

was honored for designing materials for applications in solar cells, batteries, and medical imaging.

- Helen M. Blau, Donald E. and Delia B. Baxter Foundation Professor and the Director of the Baxter Laboratory for Stem Cell Biology at Stanford University for her research on muscle diseases, regeneration and aging, including the use of stem cells for tissue repair.
- Emery Neal Brown, the Edward Hood Taplin Professor of Medical Engineering and Computational Neuroscience at MIT, was recognized for his work revealing how anesthesia affects the brain.
- John O. Dabiri, Centennial Chair Professor at the California Institute of Technology, in the Graduate Aerospace Laboratories and Mechanical Engineering. His research focuses on fluid mechanics and flow physics, with an emphasis on topics relevant to biology, energy, and the environment.
- Ingrid Daubechies, the James B. Duke Distinguished Professor Emerita of Mathematics at Duke University, was honored for her pioneering work on signal processing.
- Cynthia Dwork, Gordon McKay Professor of Computer Science at Harvard University, was recognized for research that has transformed the way data privacy is handled in the age of big data and AI.
- R. Lawrence Edwards, Regents and Distinguished McKnight University Professor, Department of Earth and Environmental Sciences at the University of Minnesota. Edwards is known for his refinement of radiocarbon dating techniques to study climate history and ocean chemistry.
- Wendy L. Freedman, the John and Marion Sullivan University Professor in Astronomy and Astrophysics at the University of

Chicago, for her observational cosmology research, including pioneering uses of the Hubble Space Telescope.

- Keivan G. Stassun, Stevenson Professor of Physics & Astronomy at Vanderbilt University for his work in astrophysics, including the study of star formation and exoplanets.
- G. David Tilman is Regents Professor and the McKnight Presidential Chair in Ecology, Evolution, and Behavior at the University of Minnesota. He studies biological diversity, the structure and benefits of ecosystems and ways to assure sustainability despite global increases in human consumption and population.
- Teresa Kaye Woodruff is the MSU Research Foundation Professor of Obstetrics, Gynecology and Reproductive Biology and Biomedical Engineering at Michigan State University. She is an internationally recognized expert in ovarian biology and reproductive science.

The nine individual recipients of the National Medal of Technology and Innovation are:

- Martin Cooper for his work in advancing in personal wireless communications for over 50 years. Cited in the Guinness Book of World Records for making the first cellular telephone call, Cooper, known as the “father of the cell phone,” spent much of his career at Motorola.
- Jennifer A. Doudna, a Nobel Laureate in Chemistry and the Li Ka Shing Chancellor’s Chair in Biomedical and Health Sciences at the University of California, Berkeley. She is a pioneer of CRISPR gene editing.
- Eric R. Fossum is the John H. Krehbiel Sr. Professor for Emerging Technologies at Dartmouth College. He invented the CMOS active

pixel image sensor used in cell-phone cameras, webcams, and medical imaging.

- Paula T. Hammond, an MIT Institute Professor, vice provost for faculty, and member of the Koch Institute, was honored for developing methods for assembling thin films that can be used for drug delivery, wound healing, and other applications.
- Kristina M. Johnson, former president of The Ohio State University was recognized for research in photonics, nanotechnology, and optoelectronics. Her discoveries have contributed to sustainable energy solutions and advanced manufacturing technologies.
- Victor B. Lawrence spent much of his career at Bell Laboratories, working on new developments in multiple forms of communications. He is a Research Professor and Director of the Center for Intelligent Networked Systems at Stevens Institute of Technology.
- David R. Walt is a faculty member of the Wyss Institute at Harvard University and is the Hansjörg Wyss Professor of Bioinspired Engineering at Harvard Medical School and Professor of Pathology at Harvard Medical School and Brigham and Women's Hospital. He was honored for co-inventing the DNA microarray, enabling large-scale genetic analysis and better personalized medicine.
- Paul G. Yock is an emeritus faculty member at Stanford University. A physician, Yock is known for inventing, developing and testing new cardiovascular intervention devices, including the stent.
- Feng Zhang, the James and Patricia Poitras Professor of Neuroscience at MIT and a professor of brain and cognitive sciences and biological engineering, was recognized for his work developing molecular tools, including the CRISPR genome-editing system.

Follow me on [Twitter](#).



Michael T. Nietzel

Follow

Michael Nietzel is president emeritus of Missouri State University. A Forbes contributor since 2019, he writes about higher education. After earning his B.A. from Wheaton College...

Read More

Editorial Standards

Forbes Accolades

ADVERTISEMENT

One Community. Many Voices. Create a free account to share your thoughts. Read our community guidelines [here](#).

 Log in

Be the first to comment...



No one seems to have shared their thoughts on this topic yet

Leave a comment so your voice will be heard first.