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Announcing the 2023 Franklin Institute Awards Laureates

SOCIAL EQUITY, SUSTAINABILITY, AND SAFETY — AMONG THE NINE AREAS OF BREAKTHROUGHS AND ADVANCEMENTS BEING CELEBRATED BY THE FRANKLIN INSTITUTE, APRIL 24-27, 2023

PHILADELPHIA, PA January 24, 2023 – The Franklin Institute is proud to announce nine outstanding individuals being honored with a prestigious Franklin Institute Award for their extraordinary scientific, engineering, and business leadership achievements. Among them is Philadelphia native **Kenneth Frazier, former Chairman and CEO of Merck and co-founder and co-chair of OneTen**, a coalition of leading organizations committed to cultivating economic opportunities for Black talent in America. Frazier is the recipient of the **2023 Bower Award for Business Leadership**, a recognition that honors leaders in U.S. business who personify outstanding qualities and attainments in leadership, the advancement of sound economic practices, and adherence to the highest ethical standards.

The **2023 Bower Award and Prize for Achievement in Science** is presented this year to an individual who has made significant scientific or engineering contributions that have improved infrastructure safety, sustainability, and resilience. **Civil and Environmental Engineer Deb Niemeier, P.E., Ph.D.**, recognized for her continuing research into improving crucial infrastructure decisions that contribute to a more equitable society, is the 2023 recipient. The award comes with a cash prize of \$250,000.

Each year, The Franklin Institute awards **Benjamin Franklin Medals** for transformative advances and global breakthroughs in science and technology, two **Bower Awards**—one for extraordinary business leadership, another for science achievement—and the new **Benjamin Franklin NextGen Award**, which is presented to an exceptional early-career researcher.

Larry Dubinski, President and CEO of The Franklin Institute, said, "We are proud to continue The Franklin Institute's longtime legacy of recognizing individuals for their contributions to humanity. These extraordinary advancements in areas of such importance as social equity, sustainability, and safety are significantly moving the needle in the direction of positive change and therefore laying the groundwork for a remarkable future."

From capturing the fastest chemical reactions to investigating the effects of climate change, from laying the foundation for today's computer programs to enabling the ultrafast computing of tomorrow, and from elucidating the fundamental properties of matter to uncovering the genetics that guide our largest organ, their scientific breakthroughs have transformed our understanding of the world. These nine visionaries will be celebrated during a ceremony held on April 27, 2023, at The Franklin Institute.

2023 Franklin Institute Awards Laureates

2023 Bower Award and Prize for Achievement in Science

- Deb Niemeier, P.E., Ph.D., NAE, University of Maryland, College Park
For pioneering the advancement and application of knowledge at the intersections among infrastructure, environment, public health, and equity through groundbreaking research on transportation systems and climate-related hazards.

2023 Bower Award for Business Leadership

- Kenneth C. Frazier, Merck & Co., Inc., Retired; General Catalyst
For his distinguished tenure leading Merck & Co., one of the world's most innovative healthcare companies, including driving breakthrough developments in immuno-oncology, and for his authoritative voice for social equity and expanded access to quality affordable healthcare in underserved communities.

2023 Benjamin Franklin NextGen Award

- Monika Schleier-Smith, Ph.D., Stanford University
For groundbreaking research elucidating fundamental properties of matter and energy by using ultracold atoms and their interactions with light.

2023 Benjamin Franklin Medal in Chemistry

- Richard N. Zare, Ph.D., Stanford University
For fundamental studies of the dynamics of chemical reactions, including the development of techniques to observe molecules as they react.

2023 Benjamin Franklin Medal in Computer and Cognitive Science

- Barbara H. Liskov, Ph.D., Massachusetts Institute of Technology
For seminal contributions to computer programming languages and methodology, enabling the implementation of reliable, reusable programs.

2023 Benjamin Franklin Medal in Earth and Environmental Science

- R. Lawrence Edwards, Ph.D., University of Minnesota
For fundamental advances in high-precision methods for dating geologic records of climate change, leading to a more detailed understanding of the earth's climate system over the past million years.

2023 Benjamin Franklin Medal in Electrical Engineering

- Nader Engheta, Ph.D., University of Pennsylvania
For transformative innovations in engineering novel materials that interact with electromagnetic waves in unprecedented ways, with broad applications in ultrafast computing and communication technologies.

2023 Benjamin Franklin Medal in Life Science

- Elaine Fuchs, Ph.D., The Rockefeller University
For elucidating the genetics of skin diseases and mechanisms that guide skin renewal, yielding insights into aging, inflammation, and cancer.

2023 Benjamin Franklin Medal in Physics

- Philip Kim, Ph.D., Harvard University
For pioneering discoveries in the new science of materials composed of single-atom-thick layers, opening the door to a vast array of new technologies.

Since 1824, The Franklin Institute of Philadelphia has honored the legacy of Benjamin Franklin by presenting awards for outstanding achievements in science and industry. The Franklin Institute Awards Program has recognized over 2,000 of the most pioneering scientists, engineers, inventors, and innovators from across the globe.

The Franklin Institute Awards Ceremony will be held on Thursday, April 27, 2023. **Bank of America** returns in 2023 as the Presenting Sponsor of the Awards Ceremony and Dinner for the 21st consecutive year.

ABOUT THE FRANKLIN INSTITUTE AWARDS

Recognizing extraordinary accomplishments in science and technology since the Institute was founded in 1824, The Franklin Institute Awards remains the oldest comprehensive science and technology awards program in the United States. Honoring extraordinary individuals who shape our world through their groundbreaking achievements in science, engineering, and business, its legacy virtually charts scientific and technological advancement through the past two centuries—from the development of the typewriter to the dawn of quantum computing. The honor roll of more than 2,000 Franklin Institute Awards laureates includes Nikola Tesla, Marie and Pierre Curie, Orville Wright, Thomas Edison, Max Planck, Albert Einstein, Frank Lloyd Wright, Stephen Hawking, Gordon Moore, Jane Goodall, Elizabeth Blackburn, Steven Squyres, Bill Gates, Dean Kamen, Subra Suresh, Cornelia Bargmann, Jim Allison, and Frances Arnold. To date, 122 laureates are also Nobel Prize recipients. For more information, visit www.fi.edu/awards.

ABOUT THE FRANKLIN INSTITUTE

Located in the heart of Philadelphia, The Franklin Institute is a renowned and innovative leader in the field of science and technology learning, as well as a dynamic center of activity. As Pennsylvania's most visited museum, it is dedicated to creating a passion for learning about science by offering access to hands-on science education. For more information, visit www.fi.edu.