

Bauer, Diana

12/10/24, 9:10-9:45 a.m. AMMTO Overview

Dr. Diana Bauer is the Deputy Director of the U.S. Department of Energy (DOE) Advanced Materials and Manufacturing Technologies Office (AMMTO). Dr. Bauer helps lead the strategic direction and execution of AMMTO's funding to advance energy-related materials and manufacturing technologies to increase domestic competitiveness and build a clean, decarbonized economy.

Dr. Bauer has held departmental and interagency leadership roles in energy storage and critical materials. Before joining AMMTO, she directed the Office of Energy Systems Integration Analysis within the Department's Office of Policy, where she and her staff looked at the connection between energy and other systems. She was the lead author of *The Water-Energy Nexus: Challenges and Opportunities* in 2014. Also, in the policy office, she led the drafting of DOE's 2010 and 2011 *Critical Materials Strategy* reports.

Before coming to DOE, Diana led the extramural sustainability research program at the Environmental Protection Agency, which focused on green engineering, green chemistry, green buildings, and transportation systems. She has a Ph.D. in mechanical engineering with a concentration in green design and manufacturing from the University of California, Berkeley.



Readahead
Materials

Benahmed, Farah

12/10/24, 2:30 - 4:00 p.m. Commercialization & Transformational Research

As the Manager of U.S. Policy & Advocacy for Breakthrough Energy, Farah Benahmed works to spur clean energy innovation in the United States. She focuses on grantmaking, policy development and advocacy, coalition building, and furthering BE's overall mission of getting to net-zero emissions as quickly as possible.

Prior to joining Breakthrough Energy, Farah led Third Way's clean energy innovation portfolio. She supported and developed innovation policies, managed the team's federal appropriations work, and led two bipartisan working groups focused on advancing innovation policy. During her time at Third Way, she testified at a House Science Space and Technology Committee hearing focused on how accelerating clean energy innovation and technology transfer can contribute to an economic recovery and a clean energy future. Farah previously worked in the front office of the Department of Energy's Office of Nuclear Energy during both the Obama and Trump Administrations. Farah was a 2019 fellow at the Clean Energy Leadership Institute and holds a Bachelor's in Science in Psychology from the University of Maryland College Park.

Biller, Stephan Robert

12/11/2024, 9:00 - 10:30 a.m. Panel Discussion on Metrics Development

Stephan Biller is the Harold T. Amrine Distinguished Professor in the School of Industrial Engineering and the Mitchell E. Daniels, Jr School of Business at Purdue University and serves as Director of the Dauch Center for the Management of Manufacturing Enterprises at the Daniels School of Business and the co-director and founder of Purdue's national initiative in eXcellence in Manufacturing and Operations (XMO). His expertise includes Smart Manufacturing, Digital Twin, Industry 4.0, and Resilient Supply Chain Management. He focuses on AI and IoT integrated with lean Six Sigma manufacturing processes to facilitate the Digital Transformation of large and especially small and medium manufacturing enterprises at scale. Previously, he served as Founder and CEO of Advanced Manufacturing International, Vice President of Product Management for AI Applications & Watson IoT at IBM, Chief Manufacturing Scientist & Manufacturing Technology Director at General Electric, and Tech Fellow & Global Group Manager for Manufacturing Systems at General Motors. He is a Six Sigma Master Black Belt, an IEEE Fellow, and an elected member of the National Academy of Engineering.

Dai, Huijuan

12/10/24, 9:45-10:30 a.m. AMMTO Program Overviews

Dr. Huijuan Dai serves as the Program Manager for AMMTO's Next Generation Materials and Processes subprogram. Her portfolio encompasses high-performance materials, advanced manufacturing processes and manufacturing digitalization. Before joining DOE, Dr. Dai spent over 15 years driving industry research and technology development across aerospace, oil and gas, and renewable energy sectors, leading multidisciplinary teams from idea generation, rapid prototyping to new technology/product introduction. She played a key role in shaping the vision and technology strategies for advancing and implementing high-value materials and manufacturing opportunities across energy sectors. She has a Ph.D. in Materials Science from

the University of Leicester in the United Kingdom, and an MBA with a specialization in Business Analytics from the University of South Carolina in the United States.

Downing, Ben

12/10/24, 2:30 - 4:00 p.m. Commercialization & Transformational Research

Ben Downing is Vice President for Public Affairs at The Engine Accelerator. In this role he helps Tough Tech founders, teams and partners, engage with public sector leaders at all levels to maximize the impact of their work. Prior to joining The Engine, Ben was Vice President for New Market Development at Nexamp, a veteran founded clean energy company, where he led the firm's strategic development. Ben represented Massachusetts's largest Senate district while serving as State Senator for 52 communities in Western Massachusetts including his hometown of Pittsfield. He was chair of the Telecommunications, Utilities and Energy Committee for six years. Ben earned a B.A. in Political Science from Providence College and a M.A. from Tufts University. He lives in East Boston with his wife Micaelah Morrill and their two sons, Malcolm and Eamon, who will someday eat them out of house and home. Once he ran for governor; if it's the last line of his bio, you can guess how well it went.

Huang, Jason

12/10/24, 2:30 - 4:00 p.m. Commercialization & Transformational Research

Dr. Jason Huang, Co-founder and CEO of TS Conductor, is a preeminent expert in advanced conductors and composite materials science. His career spans senior leadership positions at companies like CTC Global, BAE Systems, Owens Corning, and Solvay, as well as work with prestigious organizations such as the National Institute of Standards and Technology (NIST) and on critical defense aircraft projects like the F22 and F35. Under his leadership, TS Conductor has established a strong commercial presence with a robust pipeline and multiple leading utilities as repeat customers, including Basin Electric, NextEra, and Tennessee Valley Authority. The company has received multiple Department of Energy awards including the CABLE Prize, AMMTO Advanced Materials R&D Award, and MESC Manufacturing Award. Dr. Huang holds a Ph.D. in Materials Science and Engineering and an MBA from The Ohio State University, as well as an MS in Materials Science from UCLA.

Lane, Julia

12/11/2024, 9:00 - 10:30 a.m. Panel Discussion on Metrics Development

Julia Lane is a Professor at the NYU Wagner Graduate School of Public Service and a NYU Provostial Fellow for Innovation Analytics. She co-founded the Coleridge Initiative, whose goal is to use data to transform the way governments access and use data for the social good through training programs, research projects and a secure data facility.

She currently serves on the Advisory Committee on Data for Evidence Building and the National AI Research Resources Task Force. Previous to this, Julia was a Senior Managing Economist and Institute Fellow at American Institutes for Research. In this role Julia co-founded the Institute for Research on Innovation and Science (IRIS) at the University of Michigan. Julia has held positions at the National Science Foundation, The Urban Institute, The World Bank, American University, and NORC at the University at Chicago.

Masanet, Eric

12/11/2024, 9:00 - 10:30 a.m. Panel Discussion on Metrics Development

Eric Masanet holds the Mellichamp Chair in Sustainability Science for Emerging Technologies in the Bren School, with a courtesy appointment in the Department of Mechanical Engineering. At UCSB, he leads the Industrial Sustainability Analysis Laboratory, which develops models, datasets, and roadmaps for decarbonizing the industrial and information technology sectors while achieving broader sustainability and equity benefits. He is also a Faculty Scientist in the Energy Analysis & Environmental Impacts Division at Lawrence Berkeley National Laboratory.

In January 2024, he was appointed by DOE Secretary Jennifer Granholm to DOE's Industrial Technology Innovation Advisory Committee (2024-2026), which advises the Secretary on industrial emissions reduction technology development. He holds a PhD in mechanical engineering, with an emphasis on sustainable design and manufacturing, from the University of California, Berkeley.

McDaniel, Kristen

12/10/24, 12:45-2:15 p.m. EERE/AMMTO Process Workshop

Kristen McDaniel works as the Program Manager for the Technical Projects team, where she is responsible for the execution of AMMTO's activities through the Golden Field Office, including the competitive solicitation process and active project management for AMMTO's award portfolio. Prior to this, Kristen worked as a Technical Project Officer within AMMTO and its predecessor office, AMO. Before joining DOE, Kristen worked as an engineer and project manager for diverse industries, from oil and gas to nonprofit community development. Kristen has a BS in Civil Engineering from Cornell University and a MS in Community and Regional Planning from the University of Texas at Austin. She is also a certified Project Management Professional (PMP).

O'Connor, Megan

12/10/24, 2:30 - 4:00 p.m. Commercialization & Transformational Research

Megan O'Connor, Ph.D., is the co-founder and CEO of Nth Cycle. In these roles, she has led the company to commercialization in six years, guiding the industry's top talent towards record achievement, while overseeing the company's North American headquarters in Massachusetts, Commercial Production Site for Partners in Ohio, and ambitious growth plans in and outside the United States.

Peretti, Kate

12/10/24, 9:45-10:30 a.m. AMMTO Program Overviews

Kate Peretti, PhD, is the Program Manager for AMMTO's Secure and Sustainable Materials subprogram. Prior to this, she was the Program Manager for the Advanced Manufacturing Office (AMO) Consortia pillar. She came to AMO as a AAAS Science and Technology Fellow in 2018, where she worked primarily on projects funded through the RAPID Institute on process intensification and modularization. Her portfolio includes material sustainability where she works on material recyclability, particularly of plastics, and topics related to the circular economy. Prior to DOE, she spent a decade in industry where she worked in chemicals research as a lab supervisor and product manager. She graduated with a BA in Chemistry and Psychology from the University of Pennsylvania in 2002 and earned her PhD in Organic Chemistry from Cornell in 2007.

Saldaña, Chris

12/10/24, 9:00-9:45 a.m. Welcome and Introduction to the Meeting; AMMTO Overview

Chris Saldaña, Ph.D., is the director of AMMTO. He leads office strategy, management, and execution in support of a globally competitive U.S. manufacturing sector that accelerates the adoption of innovative materials and manufacturing technologies in support of a clean, decarbonized economy.

Chris joined AMMTO from Georgia Tech's George W. Woodruff School of Mechanical Engineering, where he last served as a Ring Family Professor of Mechanical Engineering. Before that, he held the Harold and Inge Marcus Career Professorship at Pennsylvania State University and was a research engineer at M4 Sciences Corporation.

Chris has extensive experience supporting industry and government laboratories through visiting affiliations/positions with the U.S. Air Force Research Laboratory, the Indian Institute of Science, Technische Universität Dortmund, Autodesk, and Sandia National Laboratories. Dr. Saldaña has received several awards, including an NSF CAREER award, the Robert J. Hocken SME Outstanding Young Manufacturing Engineer award and an R&D100 Technology Award. He is an associate editor for IISE Transactions (Design and Manufacturing), and is on the editorial boards of *Manufacturing Letters*, *Computer Aided Design and Applications*, and the *ASTM Journal of Smart and Sustainable Manufacturing*. Dr. Saldaña received a B.S. from Virginia Tech in 2004 and an M.S. and Ph.D. from Purdue University in 2006 and 2010, respectively.

Snyder, Carolyn

12/10/24, 12:30 - 12:45 p.m. Keynote Address

Carolyn Snyder, Ph.D., is the Deputy Assistant Secretary for Buildings and Industry at the U.S. Department of Energy. In this role, she leads offices that advance energy efficiency and reduce emissions from our nation's buildings and industry while supporting U.S. energy security and manufacturing competitiveness. She oversees over \$800 million annually for R&D across U.S. national laboratories, private industry, and universities. She also oversees comprehensive partnerships with energy sector leaders, other federal agencies, and state and local governments to demonstrate and deploy these technologies and support the transition to a clean energy economy.

Previously, Carolyn served as the Director of U.S. EPA's Climate Protection Partnerships Division where she led voluntary partnerships with thousands of industrial, commercial, utility, state, and local organizations. She also served as a consultant at McKinsey & Company, a White House Fellow in the U.S. Office of Management and Budget, and Director of Delaware's Division of Energy & Climate. She earned a Ph.D. in Environment and Resources from Stanford University, Masters Degrees as a Marshall Scholar from Oxford and Cambridge, and a B.A. from Amherst College. Her scientific research has been published in *Nature*, *Paleoceanography*, and *Climatic Change*.

Somani, Seema

12/10/24, 9:45-10:30 a.m. AMMTO Program Overviews

Dr. Seema Somani is the Energy Technology Manufacturing and Workforce Program Manager for AMMTO. She has over 20 years of experience in photonics, semiconductors, and capital equipment, having led product development from concept to commercialization.

Prior to joining AMMTO, Dr. Somani served as the head of advanced technology development at Thermo Fisher Scientific, where she provided strategic leadership for developing product and IP roadmaps to push the envelope in computing hardware and IoT. Additionally, Dr. Somani led a multidisciplinary team to design and deliver new products, solved complex problems leveraging business and technical acumen, directed translational R&D, and owned innovation portfolio and assessed product-market fit. She has a Ph.D. in applied physics and a minor in electrical engineering from Stanford University, as well as an M.S. in microelectronics and an M.Sc. in physics from the Indian Institute of Technology.

Thongnopnua, Joda

12/10/24, 2:30 - 4:00 p.m. Commercialization & Transformational Research

Joda Thongnopnua serves as Special Advisor for the Technology, Innovation and Partnerships (TIP) Directorate at the U.S. National Science Foundation (NSF). Thongnopnua joined NSF after serving several years in leadership roles in local government and philanthropy. He currently helps lead directorate-wide efforts to deliver on the CHIPS and Science Act, with a particular focus on building intergovernmental and cross-agency partnerships to jumpstart and support America's new frontiers of innovation that are critical to establishing U.S. leadership in key technology focus areas like quantum computing, synthetic biotechnology, and artificial intelligence. His earlier role at NSF was as a program director for its Regional Innovation Engines program. Prior to the NSF, Thongnopnua served as chief of staff to Chattanooga Mayor Tim Kelly and led major policy priorities across a 2,600-person organization and \$350 million annual budget. Prior government service, Thongnopnua also served in leadership roles at various Chattanooga-based non-profit, philanthropic, and private sector institutions, including the Community Foundation of Greater Chattanooga, Metro Ideas Project, and Lamp Post Group.

Zhao, Feng

12/10/24, 2:30 - 4:00 p.m. Commercialization & Transformational Research

Dr. Feng Zhao is the CEO and CTO of Storagenenergy Technologies, Inc., with over 20 years of experience in energy technology innovation. He founded both Storagenenergy Technologies and Aeonix Energy, which focus on next-generation energy storage solutions for aerospace and defense. Dr. Zhao has led numerous projects as Principal Investigator, securing funding from organizations such as DOE, NASA, and the Department of Defense (DoD). At Storagenenergy, he oversees technology development and business strategy, forging partnerships with key industry players. Dr. Zhao holds a PhD in Materials Science and Engineering from the University of Utah.